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ABSTRACT

The study examined the individualized education program (IEP) process by investigating and observing instructional settings, interviewing IEP service providers, and reviewing handicapped students' records. Ninety students were randomly selected for examination of their IEPs. Data were collected, recorded, and analyzed by using record review, interview, and questionnaire instruments. Internal consistency reliability analyses for all the scales within every instrument of the IEP Monitoring Analysis Plan were satisfactory. The congruences among the factors of IEP assessment, IEP objectives, IEP services, materials and equipment, and implemented program services were reported as 69.4% total match. When IEPs written by multidisciplinary teams and annual review teams were compared, in every factor matched the annual review team percentage was higher. There were significant differences in opinions among the groups of service providers (resource specialists, speech and language specialists, regular and special educators) on all three service provider questionnaire scales. The data indicated that the demographic variables of number of team members, types of specialists represented on the team, type of handicapping condition, age and ethnicity did not affect the IEP characteristics or the opinions of the service providers. (Author/CL)

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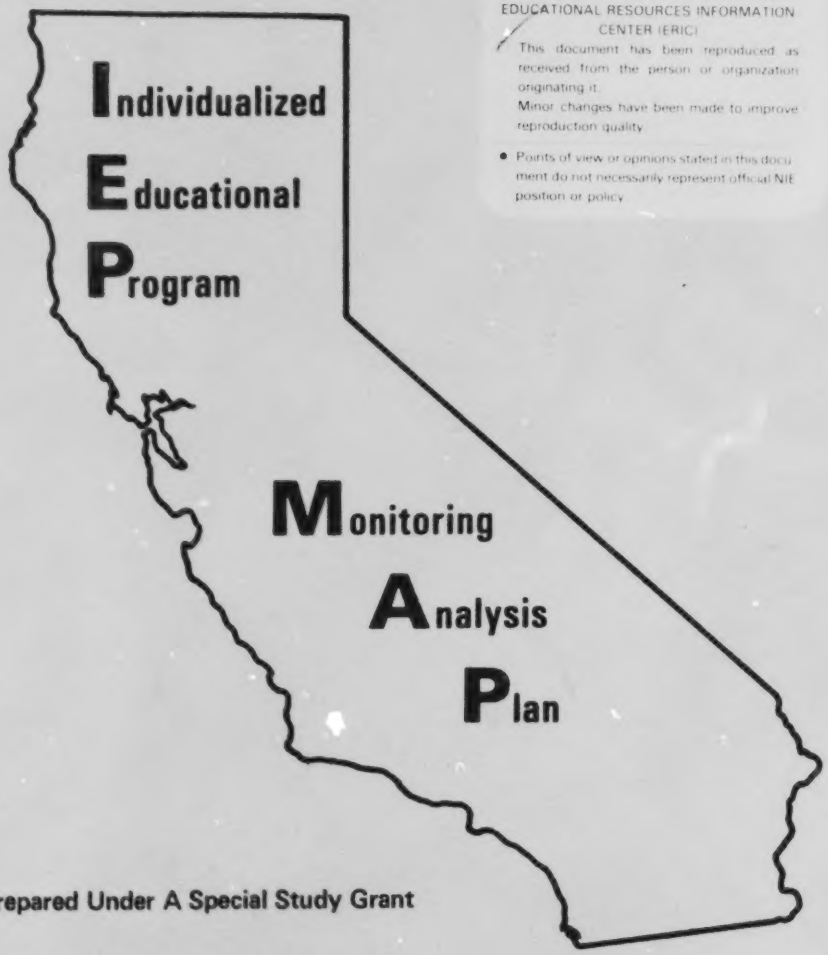

Prepared Under A Special Study Grant

Johnny W. Welton, Project Director
Individualized Educational Program
Evaluation Model: Development and Field Study

California State Department of Education
Office of Special Education
Project Number: 43-00000-81-3293-7101

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INDIVIDUALIZED EDUCATIONAL PROGRAM EVALUATION MODEL: DEVELOPMENT AND FIELD STUDY

Johnny W. Welton
Project Director

Prepared Under Grant No. 43-00000-81-3293-7101 from the

California State Department of Education

Planning, Evaluation, and Development Unit
Division of Special Schools
Office of the Santa Clara County
Superintendent of Schools

August 1981

IEP MAP was developed, field studied, and disseminated under a special study grant from the California State Department of Education. The findings and conclusions of the field study and instructional manual are the sole responsibility of the study staff. The findings do not imply the official position or endorsement of the California State Department of Education nor of the sponsoring agency.

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EXECUTIVE SUMMARY
OF THE TECHNICAL REPORT

The Office of the Santa Clara County Superintendent of Schools, Division of Special Schools & Services -- Planning, Evaluation and Development Unit was awarded a California State Department of Education Special Study Grant in the 1980-81 school year. This grant was provided to develop and field-study a model to evaluate the individualized educational programs (IEPs) process for students enrolled in special education programs and services. The special study team worked with nine school districts in Santa Clara County to create a meaningful model, Individualized Education Program Monitoring Analysis Plan (IEP MAP), that would be useful and purposeful for districts throughout the state.

An advisory team of special education parents, program specialists, teachers and administrators assisted in the development of IEP MAP by reviewing existing materials and reviewing instruments created by the research team. A second advisory team of three experts from the field also assisted by reviewing the data collection instruments. Members of the second team represented expertise in the areas of research, survey, design, evaluation, IEPs and P.L. 94-142. Both advisory teams reviewed materials developed for two types of data collection: (1) record review and (2) interview and questionnaire. Data summary forms were developed to assist with matching analyses of the data collected. Trained members of the study team interviewed and surveyed teachers, parents, specialists, and students (where appropriate), and reviewed student records to assess the process and determine if appropriate information could be obtained by these methods during a field study of 90 students' IEPs from nine school districts in Santa Clara County. The field study did not evaluate individual teachers, the instructional program, or student progress, but rather the instrumentation and process for gathering data to evaluate the IEP process through existing documentation and service provider, parent and student perceptions.

Research Questions

In addition to questions concerning the validity and reliability of the instruments, the primary questions addressed by this study were:

1. Is there congruence among the IEP assessment; IEP objectives; IEP services, materials and equipment; and implemented program services, materials and equipment for special education students?

2. When IEPs are written by multidisciplinary teams, is there greater more or less congruence among the factors of IEP assessment; IEP objectives; IEP services, materials, and equipment; and implemented program services, materials, and equipment than when IEPs are written by annual review teams?

3. Do the compliance and quality characteristics of IEPs written by multidisciplinary teams differ from the compliance and quality characteristics of IEPs written by annual review teams?

4. Do the opinions of service providers concerning the IEP differ according to the type of team which had written the IEP?

5. Do the five demographic variables of number of members on the writing team; types of specialists represented on the writing team; type of handicapping condition of the student; age level; and ethnicity of the student affect the characteristics of the IEP and/or the opinions of services providers?

Procedures

Data were collected, recorded and analyzed by using record review, interview, and questionnaire instruments. Data summary forms provided matching data that were used to answer the research questions. (See Figure 1.)

Development of data collection instruments	Review by a team of experts and by an Advisory Team	Pilot Study	Data Collection

Figure 1. Design of the Study

Data collectors used questionnaire, interview, observation, and review techniques at school sites to assure a high rate of response. They investigated assessment data, IEPs, and implemented programs. Data collector bias was lessened by having them complete questionnaires, interviews, and observations before reviewing the IEP and assessment information in the students' records. Information was recorded using a structured format to allow matching comparisons of the data collected. Responses were reported in summary statements as well as by individual item. Items were included within the instruments to examine possible factors which might have accounted for the results obtained.

One hundred-eight students from Santa Clara County were randomly selected from nine participating school districts for examination of their IEPs. The sample was stratified by age level (elementary and secondary), major area of handicap (communicatively, physically, learning, and severely), and date of placement in special education. Parent permission was obtained for 90 students who participated in the study. Following the development of the instrumentation and the pilot study activities, the data was collected during a six-week period. Data was then analyzed to answer the research questions.

Analysis

Eleven composites were formed to reduce the data from four instruments to facilitate the interpretation of data. Individual item scores were used to compare with the composite scores as well as for reporting item results. Results were compared within instruments and across instruments. Matches and no matches were compared for pairs of indexed characteristics as well as by type of IEP.

Difficulty in obtaining parent permission reduced the sample from 108 to 90 students. Replacement students were selected until the available population was exhausted. The low incidence of severely handicapped in the general population led to a very small number of severely handicapped students in the sample, but this also indicates the value of any information gathered on this very small population, and can be construed as representative. Other variations in descriptions of the sample occurred because of differentiation in the information provided from the district office records and the actual situation found at the school site. Examples would include differences in the type of handicap where district indicated one area, and placement or assessment identified another type of handicap. The 90 students selected yielded questionnaires and interviews from 209 service providers, 52 parents, and 11 students, data from 117 IEPs and descriptions of 90 implemented programs.

The amount of information was reduced by creating reliable composites (scales) within each instrument. Almost all the reliability coefficients resulting from the Internal Consistency Reliability Analyses for all the scales within every instrument are satisfactory. Fourteen of 17 reliability coefficients are .70 or greater. The other 3 reliability coefficients are all above .61.

These moderate to high reliabilty coefficients suggest that each of the scales includes a homogeneous set of items, i.e. items within each scale are measuring the same construct. Therefore, the use of these scales (rather than individual items) in the subsequent analyses is justifiable. In addition, the examination of the scale means and standard deviations show there is a cross subject variability in scores on each scale, indicating the scales can detect between subject differences. Since the scale means are well below the maximum possible score for each scale, the scales don't demonstrate the problem of a "ceiling effect" (e.g. most respondents answering every item in the most favorable way). Almost all the item-total correlations are positive. That is, a high score on any one item is related to a high score on the total scale; items within each scale are discriminating among subjects in a consistent direction.

The Pearson Product Moment Correlation matrix of every scale, with every other scale, indicated the correlations of scales within instruments were generally larger than the correlations of scales across different instruments. This was to be expected because the same respondents and raters completed the same scales within any set of instruments, but different raters completed the scales across different instruments.

Although some of the correlations of scales within an instrument are statistically significant, the absolute magnitude of these correlations is small enough to justify the use of separate scales, i.e. the scales within an instrument are measuring something different (e.g. the Compliance Review Statements scale correlates .31 with the Compliance Review Members scale). This correlation is statistically significant, yet small enough (much less than the square root of the reliability of either instrument) to maintain statements and members as two separate scales. The Service Provider Questionnaire scales show near zero correlations with the Compliance Review and Quality Review, indicating that the opinions of service providers about the IEP process and IEP implementation bears little relation to the objective evidence in the student's file. The Compliance Review and Quality Review scales are moderately to highly related.

The Stepwise Multiple Regression was used to identify the smallest set of scales that are maximally related to the total percent of matches. The matrix shows that the single best predictor of total matches is the goals scale of the quality review (i.e. those seven items that describe the adequacy of the goals and objectives for the student and how well they have been specified). All the correlations of scales with total matches are positive, except the correlations of the team total scale of the Multidisciplinary Team Review with total matches, and the members scales of the Compliance Review scale with the total matches. These negative correlations were near zero and not statistically significant.

When the predictor variables (scales) are entered in the order described, the results in the summary Table Y suggest that the Quality Review and Compliance Review scales alone account for most of the variance in total matches. The values in the "R Square" column are directly interpretable as the proportion of variance in the criterion variable (total matches) accounted for by the predictor variables (scales).

The Compliance Review scales account for 12% of the variance; the Quality Review scales account for an additional 18% of the variance; and all the other instruments combined account for only an additional 1% of the variance. All the instruments except the Compliance and Quality Review instruments could be dropped without losing any significant or unique information about the IEP process or IEP implementation. The Quality Review instrument, specifically the goals scale, is a better predictor of total matches than the Compliance Review instrument.

Conclusions

Internal Consistency Reliability Analyses for all the scales within every instrument were satisfactory. Fourteen of 17 reliability coefficients were .70 or greater. The other 3 reliability coefficients were all above .61. Quality Review and Compliance Review scales alone account for most of the variance in total matches. The Compliance Review scales account for 12% of the variance; the Quality Review scales account for an additional 18% of the variance; and all the other instruments combined account for only an additional 1% of the variance.

The congruences among the factors of IEP assessment, IEP objectives, IEP services, materials and equipment, implemented program services, materials and equipment were reported as 69.4% total match. The match between IEP Assessment and IEP Objectives was found to be 60.3%, while the match between IEP Objectives and IEP Services/Materials/Equipment was 70.9%. This discrepancy was significant at the .05 level.

When IEPs written by multidisciplinary teams and annual review teams are compared, in every factor matched the annual review team percentage was higher. For two factors matched, Objectives by Program Services/Materials/Equipment and IEP Services/Materials/Equipment by Program Services/Materials/Equipment, the differences between the multidisciplinary team and the annual review team scores were statistically significant at the .02 level.

Compliance and quality characteristics of IEPs written by multidisciplinary teams differed from the compliance and quality characteristics of IEPs written by annual review teams. Mean scores reported for the separate t-tests show that for every Compliance Review and Quality Review characteristic, the average scores for the annual

review teams were higher than those for the multidisciplinary teams. The mean differences between multidisciplinary teams and annual review teams were statistically significant at the .02 level, or higher, for the Compliance and Quality Review characteristics of: the statements scale of the Compliance Review (which records information about whether the IEP includes complete, partial, or no statements about the students's present level of performance, long-range goals, duration of services, etc.); the Compliance Total Scale; and the number of services to be provided from the Quality Review Instrument. Discriminating variables allow the correct identification of the type of team writing the IEP with 70% predictability.

There were statistically significant differences in opinions among the groups of service providers on all three Service Provider Questionnaire Scales. Resource Specialist and Speech and Language Specialists had the highest means on all three scales. Regular Education Teachers were consistently among the lowest scores on all three scales. For the process scale, Special Day Class Teachers, Resource Specialists and Speech Specialists had means significantly higher at the .05 level than Regular Education Teachers.

The data indicated that the demographic variables of: number of team members, types of specialists represented on the team, type of handicapping condition, age and ethnicity did not affect the IEP characteristics or the opinions of service providers.

Recommendations

1. These instruments (IEP MAP) may be used for continued monitoring and evaluation of the IEP process.
2. These instruments identify specific areas in need of agency action.
3. Writers of IEPs need to have close proximity to the actual service providers and service setting.
4. Further study into the composition and activities of the multidisciplinary team is warranted.

These materials and the design of this study have completed the goal of this study to provide a flexible method of obtaining information on which to base activities for the improvement of educational services. This model for collecting information was judged to have high content validity by a panel of experts and found to have high rate of internal reliabiltiy.

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CHAPTER I

INTRODUCTION

Although special education in the United States had its early beginnings in 1880, it was not until the 1970s that federal legislation was enacted requiring states to provide programs and services to meet the needs of all handicapped children. Public Law 94-142 was passed after several court decisions firmly established that all children including the handicapped were entitled to the same rights under the law.

The individualized educational program (IEP) required by the law is intended to serve as a management tool for planning, programing, and evaluating special education programs and related services provided to handicapped children. This management tool has a primary impact on the assessment, placement, instruction, monitoring, and evaluation components of a full-service delivery system. The IEP serves individual, as well as organizational, needs and requirements. The IEP includes written goals and objectives used to direct instruction and review student progress on at least an annual basis. The goal of this study was to design and field study a model process for the analysis of individualized educational programs (IEPs) of students enrolled in special education programs and services.

Statement of the Problem

Are written individualized educational programs (IEPs) fulfilling the purposes for which they were intended?[1] Do discrepancies exist between IEPs written by multidisciplinary teams and annual review teams? Do discrepancies exist between the IEP assessment data and the program designed in the IEP? Are the programs designed in the IEPs being implemented in the classroom and are services actually being provided? This study addressed these questions raised by legislators and by school personnel who have tried to implement state and federal IEP legislation.

Purpose of the Study

This study developed and field tested instruments to examine the IEP process and meet legal requirements for monitoring and evaluation. Federal and state law requires IEPs to include assessment data, goals, objectives, designated services and curriculum information. The development of the IEP is intended to flow from the information obtained by assessment directly into a list of identified needs called goals and objectives, then to an identification of required services, and ultimately to a specially designed curriculum, if necessary. Each IEP is then to be used to determine placement to meet the needs of the child. (See Figure 1.) The law assumes that the placement will provide the child with the instruction and services intended by the IEP. This study provided an examination of the IEP development process and the resultant special education programs and services which are required by law at great cost in time and money.

Identification and Referral

On-going public awareness program, referral process and school wide screening procedures for the identification of children by parents, teachers, and any others who may suspect the child needs special education

Assessment

by the
Multidisciplinary Team

IEP Development

by the
Multidisciplinary Team
or
Annual Review Team

with parents to develop an IEP including goals, objectives, services, and curriculum and on which to determine placement

IEP Implementation and Placement

of classroom programs and services

Third Year Evaluation by the Multidisciplinary Team

Annual Assessment by the Annual Review Team

FIGURE 1 PLACEMENT IN SPECIAL EDUCATION

Two types of committees have been used to write IEPs which may indicate a potential for incongruencies in the content and implementation of written plans. One is a multidisciplinary team consisting of specialists from several fields, such as physicians, speech pathologists, physical therapists, learning specialists, vocational education

specialists and psychologists. The other type of committee, the annual review team, is teacher-centered and includes those teachers and specialists who provide instruction and service to the child. Both teams include an administrator knowledgeable in the areas of special education programs, services, and the law; one or both of the parents; and any other specialists attending at the parent's or the school's request.

The multidisciplinary team is most often used to write IEPs for first-time admission to special education programs and services and to evaluate the IEPs for the third year review. The teacher-centered team is usually formed for the annual review of the IEP during continued placement. There has been no research related to what impact this change in team structure has had on the IEP and the programs and services actually provided the child. This study examined whether internal and external discrepancies exist between the written IEPs and implemented programs of students enrolled in special education, as well as whether discrepancies exist between IEPs written by both types of teams.

Research Questions

This study analyzed IEPs of students enrolled in special education programs and services. Five primary questions answered by this study were:

Question 1: Is there congruence among the factors of:
IEP assessment;
IEP services, materials and equipment,
implemented program services, materials and equipment
for special education students?

Question 2: When IEPs are written by multidisciplinary teams, is there more or less congruence among the factors of:
IEP assessment,
IEP objectives,
IEP services, materials, and equipment, and
implemented program services, materials, and equipment
than when IEPs are written by annual review teams?

Question 3: Do the compliance and quality characteristics of IEPs written by multidisciplinary teams differ from the compliance and quality characteristics of IEPs written by annual review teams?

Question 4: Do the opinions of parents, students, and service providers concerning the IEP differ according to the type of team which had written the IEP?

Question 5: Do the demographic variables of:

number of team members on the writing team,
types of specialists represented on the writing team,
type of handicapping condition of the student,
age of the student, and
ethnicity of the student,

affect the characteristics of the IEP and/or the opinions of service providers?

Background and Need for the Study

Public Law (PL) 94-142 requires that each individual with exceptional needs shall have his or her educational goals and objectives specified in a written IEP.[2] Since the intent of this legislation is to assure each individual with exceptional needs receives a publicly supported program appropriate to his or her educational needs, the relationship between the written educational needs indicated by assessment data and the program actually implemented was examined in this study. Other factors which affect the development of the written plan or the provision of a program were also explored.

As delineated in Section 602(18) of PL 94-142, the definition of special education encompasses two fundamental philosophical concepts. First, special education involves specially designed instruction to meet the unique needs of handicapped children. This philosophical concept is indicative of a commitment by special educators to move: (1) away from the "medical model" of conceptualizing diagnosis and treatment in terms of intervention approaches for specific handicapping categories, and (2) toward a functional analysis of the behavioral patterns and unique

learning environments and resources necessary for "individualizing" each handicapped child's educational and therapeutic program. This trend recognizes the importance of noncategorical, or generic, instructional approaches (based on basic behavioral principles) in structuring and modifying a handicapped learner's behavior and environment. The trend also recognizes that generic instructional approaches, when used in the classroom, are flexible enough to meet the unique needs of all handicapped children. Gotts observed:

> The collective experience of special education teachers, support personnel, administrators and others close to the situation was that diagnostic categories or labels served poorly as a basis for designing appropriate instruction (and) given an opportunity to consider alternate ways of thinking about the problem, special educators were quick to accept, adapt, and implement systematic programs that emphasized and facilitated individualized instruction.[3]

The second philosophical concept is that special education involves the integration, when appropriate, of handicapped children with their nonhandicapped peers in the normal educational environment. The judicial foundation of the "least restrictive alternative doctrine" is based on the belief that handicapped individuals need to participate in the "patterns and conditions of everyday life which [are] as close as possible to the norms and patterns of the mainstream of society."[4] The application of this "normalizing principle" to special and general education programs has led to changes in existing service delivery arrangements, as well as to changes in the allocation of fiscal, material, and personnel resources to special education programs.

Emerging concurrently, these two philosophical concepts have been employed in a wide variety of educational programs and projects. For example, Scalon incorporated these philosophical concepts in an individually prescribed instruction system (IPI) in which specific behavioral and instructional objectives are "interlinked with diagnostic tools and teaching materials."[5] With the IPI system, the teacher's role is to diagnose a handicapped student's abilities by employing a placement instrument and achievement pretest representing the objectives within a learning unit, and to prepare and implement "a learning prescription

utilizing the set of objectives and complementary instructional materials produced for the program."

Stillwell, Artuso, Taylor, and Hewett described what has come to be known as the "engineered classroom."[6] The instructional premise of the engineered classroom was that an educational model, as a developmental sequence, needs to provide for the merging of individualized instructional techniques with the fundamental principles of behavior modification theory.

Peter and Wisely described a prescriptive teaching system which recognizes "that the systems approach is also a suitable methodology for dealing with certain human and social problems [and that] it can provide the unifying or integrating mechanism for utilization of...scientific knowledge about teaching and learning."[7] The prescriptive teaching system is designed to optimize instruction for the handicapped child while providing a systematic program of teacher education. Furthermore, "the prescriptive teaching system is an organization of definable and observable components of the process of instruction to achieve a pre-determined or prescribed objective."[8]

The IEP is intended as a management tool for (1) planning, programming, and evaluating special education programs and related services provided to individual handicapped children; (2) organizing agency decision-making, operation, and structure; and (3) measuring student progress. The law defines the IEP as a written statement for each handicapped child which includes: (1) a statement of the present levels of educational performance of the handicapped child, (2) a statement of annual goals, (3) a statement of short-term objectives, (4) a statement of the specific educational services to be provided to the handicapped child, (5) a statement regarding the extent to which the handicapped child will be able to participate in regular educational programs, (6) the projected date for initiation and anticipated duration of such services, and (7) appropriate objective criteria and evaluation procedures and schedules for determining, on at least an annual basis, whether instructional objectives are being achieved.[9]

While the preamble to the regulations for PL 94-142 states that the IEP is not intended as a binding contract between schools and parents,

state and local agencies are responsible for providing the services delineated in the IEP. However, the law does not require that "any agency, teacher or other person be held accountable if a child does not achieve the growth projected in the annual goals and objectives."[10] The value of the IEP resides in its being used as a management tool for the planning, programming, and evaluating of special education programs and related services, and not as a compliance document needed for receiving funds or as a guarantee that the handicapped child will achieve all instructional goals. Furthermore, because of active parental participation in the development of individualized programs and placement of handicapped children in appropriate educational settings, professional responsibility dictates that the "social contract" understanding of "services promised, services delivered" be honored. This professional responsibility involves monitoring and evaluating IEPs.

Monitoring is the process of making necessary changes in a handicapped child's program based on systematic feedback from the instructional environment. Monitoring provides information needed to determine the appropriateness of the IEP to the specific child and the quality of implementation. Basic monitoring functions assure that goals and objectives are being met, that implementers are being held accountable for meeting their responsibilities, and that program changes were based on an accumulation of specific data.[11]

The evaluation of the appropriateness of the IEP is prescribed in PL 94-142. Specifically, the law requires the development of "appropriate objective criteria and evaluation procedures and schedules for determining, on at least an annual basis, whether instructional objectives are being achieved."[12] In addition, the law implies that the state educational agency may be required to report evaluation results on IEPs to the U.S. Commissioner of Education. The law indicates that the state educational agency is required to describe in the state annual plan the procedures for evaluating the effectiveness of IEPs and other related information.[13] Specifically required is the "comparison of a sampling of individualized educational programs with the program actually provided."[14]

On November 22, 1980, the State of California, Department of Education received a fifty page compliance review report from the U.S. Department of Education, Office of Special Education which indicated areas of activity or lack of activity which had placed California in a position of noncompliance with PL 94-142. One section of the report detailed monitoring and evaluation procedures. A directive to establish a monitoring plan including on-site review was issued requiring that:

> DOE [state Department of Education] must collect, at least annually, from each agency subject to monitoring sufficient data to determine whether the monitored agency is in probable compliance with all of the requirements of Subparts C, D and E of the Regulation. This general data collection effort must cover all program areas and must include data necessary to allow the application of all objective noncompliance measures and inquiry triggers.
>
> . . . a comparison will be made between the randomly sampled IEPs of a significant number of students in each disability category (i.e., at least 5%, or 100, whichever is larger) and the services actually provided to such students[15]

Monitoring involves data collection and analysis. Evaluating involves judgmental decision-making based on the monitoring data. The purpose of monitoring and evaluating is to provide the necessary managerial control of guiding activities toward some pre-determined goals. The essentials of managerial control involve pre-determined targets, a means of comparing activity with a criterion, a means of measuring activity, and some mechanism that will correct current activity to achieve desired results.

The presence of monitoring and evaluation procedures implies the necessity for ongoing development. The systems, individuals, and resources of the educational unit must be mobilized in a program of growth and development. Schmuck writes that staff and students are often confronted with "input overload, they make poor use of their internal resources, become cut off from their surrounding community, lack the skills of collaboration and group synergy, and are generally traditional and even rigid in their reliance on outmoded educational practices." Realistically then, the problem becomes one of motivation, enlisting the cooperation of parents, students, and staffs to preform the necessary

tasks with both efficiency and enthusiasm. Schmuck suggests that of the three strategies used for self-renewal, technical assistance, content training and process consultation, process consultation offers the greatest potential for success in today's multifaceted schools.

> Process consultation focuses primarily on the "how" of interpersonal and group interactions rather than on the "what" of their content. Process facilitators consequently deal with problem specification, problem analysis, and problem solving. They often help staff members take actions that relate directly to the programmatic concerns and instruction environments.[16]

Therefore, the monitoring and evaluation of the IEP process must be translated into action by educational decision makers that will assure the continual organizational development of the particular educational unit. Studies in this area would reflect the progress in the implementation of the IEP process and related legal mandates.

While the law requires program evaluation, no specific analysis has been reported to indicate whether the IEP process is working. If IEPs are working, then research would indicate that assessment data is reflected in the written IEP and compares positively to the programs and services actually provided, regardless of which team writes the IEP. However, research indicates that the more involved the service providers are with the writing of the IEP, the fewer discrepancies exist between the written plan and the classroom program and services provided.[17] Therefore, IEPs written by an annual review team are more likely to show less discrepancy between program design and the implemented classroom program and services than those IEPs written by multidisciplinary teams. Furthermore, because of the level of specialization of members of the multidisciplinary team whose primary purposes include assessment and IEP development, IEPs written by the multidisciplinary team are more likely to reflect assessment data in the program design. The differentiating characteristics of the two types of teams writing IEPs and the fact that the writers of the IEP are not always the implementers indicate the existence of a potential for discrepencies between the written IEP and actual classroom activities. There also appears to be a possibility that the learning needs, as identified by the assessment, are not always the basis upon which the IEP is written and placement chosen.[18]

Review of Research on IEPs

The majority of the literature related to the IEP has focused on compliance activities to implement the IEP process; few of the required evaluations of IEPs have been reported. The Bureau of Education for the Handicapped commissioned and subsequently published in 1979 four papers investigating issues of quality in the implementation of PL 94-142. These papers, reviewed below, recommended models for monitoring and evaluating various aspects of IEPs. Stevens and Macy recommended a self-audit system of analysis with a criteria-rating form for use with a sample of IEPs. Observation in identified and specified areas, collection of data, and scoring allowed numeric evaluation and rating of IEP implementation.[19] Iano provided criteria for evaluating quality and procedures concerning IEPs and tried to determine progress toward implementation of IEPS. Evaluation centered on how well the IEP resulted in stated student performance and the relationship of the implemented program to the written IEP.[20] Walker established "best" practice standards in the areas of procedures, written plan, and implementation.[21] Gillespie recommended evaluation by self-renewal whereby all participants engaged in the IEP process were involved in decision-making resulting in a constant process of change.[22] Studies implementing these models have not been reported in the literature.[23]

Alper reported in 1978 a study of 265 IEPs written in California during 1976 and 1977. Of these, 107 were written by types of teams defined as annual review teams and 107 were written by types of teams defined as multidisciplinary teams. The remaining IEP writing teams were unspecified as to type. There existed a variation in the type of placement decisions arrived at by each team. There was little variance in the area of specificity of the IEP, although many IEPs were found to lack various components mandated by law. Only 25% of the objectives written by either group was found to be complete and adequate. Plans lacked a specification of placement settings and evaluation procedures. IEPs written by the annual review teams were more specific about the activities of the implementer and the IEPs written by multidisciplinary teams were

frequently more detailed about the methods and/or materials to be used. Alper suggested that the major factor that predicted outcome was the proximity of the writer to implementation of the objective. Finally, substantial differences were reported in the degree to which the regular education teachers (59%) and special education teachers (93%) were able to implement the provisions of the IEP which indicated the level of comfort by special education teachers with the concept of implementing special education programs and the lack of training for regular education teachers in working with special education children in the regular classroom.[24]

The Independent Evaluation of the California Master Plan for Special Education included an evaluation of the IEP process. This study reported findings from questionnaires sent in 1979 to 6,000 special and regular education teachers and 3,000 parents of students enrolled in special education. Although the majority of teachers sampled were satisfied with the assessment procedures, major concern was the amount of time and paperwork required prior to placement. The majority of teachers were satisfied with placements, although some of the secondary teachers felt they had at least one student who was inappropriately placed. A relationship was noted between teachers attitudes about assessment procedures and their students' ability to benefit from their educational program. Of the parents surveyed, 90% reported being at least somewhat satisfied with the program. But only 70% reported having had contact with the school about their child's program during the year. Between 20 and 30% of the parents reported not knowing whether the child was receiving all or some of the services on the IEP. However, 70% of the teachers reported that the IEP was being met.[25]

A University of Pacific research team headed by Ann Zinck evaluated the IEP process in 1980 by mailing a battery of questionnaires to 365 school-based personnel with 173 respondents. A separate battery of questionnaires was mailed to 84 central office district-level personnel with 35 respondents. Respondents provided 535 surveys out of a potential 1,825. A large majority of the respondents (83%) indicated that they had an adequate understanding of the basic elements of the IEP process including assessment, design, and implementation. When rating the effectiveness of the components of the IEP objectives and objectives as

criteria for the annual review, 10 to 24% of the respondents reported them as "inadequate" or "not in use." Of the personnel from district offices, 32% indicated that determination of placement took place before the IEP meeting. In addition, 60% of the school-based respondents indicated the use of the IEP to assist with implementation less than once per month. The school-based respondents reported the following reasons why set objectives were not achieved: objectives set too high (21%), inadequate time to achieve objective (20%), objective too general, vague (10%), lack of appropriate staff (7%), lack of appropriate facilities (7%), lack of materials (6%), and objectives did not match diagnosed needs (6%). Zinck reacted to these opinions of special educators by stating that "the IEP document itself seems to be of relatively minor importance to the effectiveness and efficiency of the process." The determining factors for the efficient and effective functioning of the IEP process were "the personnel involved and the leadership they [were] receiving."[26]

Los Angeles Unified School District presented an internal outcome study in 1980 of fifty randomly selected IEPs. The IEPs were reviewed and interviews conducted with specialists providing special education services based on their attendance records. The study reported that 10% services by type and 50% service parameters by amount were not in agreement with those indicated on the IEPs and that 22% of the pupils were not, for various reasons, in the placement schools indicated on the IEPs.[27]

In 1969 Szabo found that members of child study teams ranked the importance of evaluative data differently depending on their role and on the severity of the child's handicapping condition and type of disability. Members representing administration, instruction, and student services tended to agree on rankings of assessment areas, while members representing regular education, and special education differed in their ranking of the importance of evaluative data. This study may indicate the potential for variance in the acceptance and ultimate implementation of the student's program based upon which type of team writes the IEP.[28]

Schenck collected 243 IEPs and psychoeducational assessments in 1979 for comparison that were judged "adequate" by the providing administrator from thirty-seven local educational agencies in Connecticut. Schenck found statistical independence between psychoeducational assessment

recommendations and the long-term goals and short-term objectives stated in the IEP which indicates the assessment information does not match the IEP.[29]

Also in 1979 Barnett compared the effectiveness of the IEP with that of the Individual Profile used prior to the existence of IEPs in Columbia, South Carolina. Results were reported for thirty-eight learning disabled students. Achievement measures indicated no significant difference in annual student gain with or without the IEP, although the survey of teacher attitudes reported that a high percentage saw value in the IEP as a general management tool.[30]

Implications of the Study

This study provided the following information:

1. How well IEPs are being implemented as written. The study provides information to parents, educators, and legislators regarding the extent program planning impacts or affects implemented programs. The value of assessment and the written IEPs to teachers and students may be evidenced if the program is implemented as written.
2. The extent to which the program design of the IEP is related to assessment information. This study provides information to parents, educators and legislators regarding the extent to which children receive appropriate, individualized special education programs and services as required by law. The study also demonstrates the effectivenss of the IEP process designed by the regulations. Therefore, if differences exist, they will indicate that programs and services are not being designed based upon individual needs and then implicate the need for further staff development in this area. It will point toward the need for and level of monitoring by the federal, state and local agencies.
3. The differences in IEPs written by multidisciplinary teams compared to those written by annual review teams. The study compared the two commonly practiced modes for writing IEPs which will assist educators and legislators in evaluating the IEP

process and the effectiveness of the law. This study also identified the strengths and weaknesses of the multidisciplinary team and the annual review team processes. Therefore the value of using two types of teams may be examined and the degree to which similar program results are achieved by each process will be known. The multidisciplinary team may show trends toward thoroughly sophisticated assessment and highly compliant IEPs, but may not show the degree of continuity with the implemented program. The annual review team may trend toward written IEPs that are more directly related to the implemented program and actual classroom practice. If this differentation results,then federal, state and local agencies may need to re-examine the assessment and IEP processes and procedures.

4. The perceptions of the regular and special education service providers, parents, and students concerning the IEP. The effectiveness of using two types of teams to write IEPs can be examined through the perceptions of the implementers of those programs. The study indicates the need for training for and communication between the writers and implementers of the IEP in the management and implementation of the program.
5. The effect selected demographic variables have upon the characteristics of the IEP and/or the perceptions of services providers. The demographic variables included the number of team members, types of specialists represented on the team, type of handicapping condition, age, and ethnicity of the student. The study indicated that legislative and educational planners need to monitor educational processes in relation to the effect these characteristics have on the IEP. This study assisted in this monitoring and indicated the direction of future planning, both in the education of exceptional children and in other similar situations.

Information gathered in the study allowed for an analysis of IEPs and the related processes, and provided indications of the future direction of State Department guidelines concerning staff development, special education programs, evaluation, and instructional designs. The results of

this study provide local educational agencies and special education service regions an opportunity for data-based decision-making concerning policies, supervision, and training for effective provision of service under the law. The study also helped determine the direction of leadership roles in developing IEPs, multidisciplinary team activities, the level of teacher involvement in IEP writing, and the degree of involvement of support personnel, such as resource specialists and program specialists among others, in the classroom. Apart from providing information, the study will serve as a model to all leaders in special education for evaluating special education programs and services and for complying with the law in reporting evaluation results.

Definition of Key Terms

Annual review team: members at a meeting for the purpose of writing or reviewing and revising, at least annually, a special education student's IEP. Each meeting includes, but is not limited to, the following participants: a representative of the public educational agency who is qualified to provide or supervise special education programs, the child's teacher, one or both of the child's parents, others who have provided special education to the child, the child when appropriate, and other individuals at the discretion of the parent or agency.[31]

Assessment data: information obtained concerning a child from a variety of sources, including, but not limited to, aptitude and achievement test scores, teacher recommendations and observations, physical condition, social or cultural background, and adaptive behavior documented in the IEP and student file.[32]

Classroom program and services: instructional practices and services present in the classroom of a special education student, including the materials and equipment.[33]

Handicap: a condition including, but not limited to, one or more of the following characteristics manifested over a long period of time and to a marked degree which adversely affects educational performance: deaf, deaf-blind, hard of hearing, mentally retarded, multihandicapped, orthopedically impaired, other health impaired, seriously emotionally

disturbed, specific learning disabled, speech impaired, and visually impaired.[34]

Individualized educational program (IEP): a written statement for a handicapped child that is developed and implemented. Each IEP must include: a statement of the child's present levels of educational performance, annual goals, objectives, a statement of services to be provided, the dates for initiation and duration of services, and objective criteria and evaluation procedures for determining on at least an annual basis whether the instructional objectives are being achieved. IEP compliance is the documentation of the information required in the written IEP by law. IEP quality is the documentation of information which might provide additional assistance to the IEP developers and services providers. Elements of IEP quality include, descriptions of number, amount, and specificity of assessment, abilities, strengths, weaknesses, goals, objectives, services, and service providers.[35]

Multidisciplinary team: members at a meeting for the purpose of developing for the first time (initial placement) or reviewing and revising (third year evaluation) a special education student's IEP. In either case, a comprehensive multidisciplinary assessment has preceded the writing of the IEP. Each meeting includes, but is not limited to, the following participants: persons or specialists including at least one teacher or other specialist with knowledge in the area of suspected disability who assess the child in all areas related to the suspected disability, including, where appropriate, health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities; a representative of the public educational agency who is qualified to provide or supervise special education programs; one or both of the child's parents; the child when appropriate; and other individuals at the discretion of the parent or agency.[36]

Objective: a description of a performance you want the learners to be able to exhibit before you consider them competent. An intended result of instruction, rather than the process of instruction itself.[37] Something toward which effort is directed; an aim or end of action.[38]

Program design: the description of the special education program as written in the IEP which may include goals, objectives, instructional design, materials, equipment, classroom placement, and designated instructional services.[39]

Service provider: a person who provides service to a special education student, including, but not limited to, regular education teachers, special education teachers, therapists, clinicians, and specialists.

Special Education Students: persons from birth to twenty-one years of age who have been identified through assessment to have one or more handicapping conditions which requires specially designed instruction to meet their unique needs. An IEP is written for all students designated as special education students. Their impairment requires instruction, services, or both, which cannot be provided by a modification of the regular school program.[40]

Assumptions of the Study

Three assumptions underlie this study:

Assumption 1: It was assumed that the IEP approach has value. This approach has been defined and required by law for every special education student and the literature has indicated widespread support of the concept.

Assumption 2: This study has not attempted to evaluate the appropriateness of process, content, instruction, or placement of a particular special education student. It was assumed that every IEP and placement was appropriate for the individual student.

Assumption 3: It was assumed that all local educational agencies were in compliance with the requirements of law, including the provision of resources to implement the IEP as written.

Limitations of the Study

This field study has validated the instruments created. These procedures and instruments may be used with a variety of situations and populations. While the study may indicate trends throughout special education, the sample was restricted to populations in Santa Clara County and does not allow for statistical generalization to a larger population except where such populations are similar to that in Santa Clara County.

Santa Clara County is located in central California and is served by thirty-three school districts. These districts are organized into seven special education service regions. In this study, nine school districts from Special Education Service Regions III and VII participated in the study. Santa Clara County is considered both urban and rural in nature. The county includes large cities such as San Jose (population above 500,000) and Santa Clara (above 90,000), with diverse industrial interests and small cities of less than 25,000 population with suburban and agricultural orientations.[41]

CHAPTER I
FOOTNOTES

[1]Public Law 94-142, The Education for All Handicapped Children Act (1975), "...requires each student enrolled in special education programs and services to have a written individualized education program (IEP)."

[2]Public Law 94-142, The Education for All Handicapped Children Act, (1975).

[3]E. A. Gotts, "The Individualized Education Program: Potential Change Agent for Special Education," Conference Summary of Public Law 94-142, (Washington, D.C.: Roy Little Associates, 1976), p. 67.

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[5]R. G. Scalon, "Individually Prescribed Instruction: A System of Individualized Education," unpublished paper of Research for Better Schools, Inc., Philadelphia, 1971.

[6]R. J. Stillwell, A.A. Artuso, and F.M. Hewett, "An Educational Solution: The Engineered Classroom," in Strategies for Teaching Exceptional Children, eds. E.L. Meyen, G.A. Verguson, and R.J. Whelan (Denver: Love Publishing Co., 1972), pp. 59-79.

[7]L. J. Peter and F.G. Wisely, "The Prescriptive Teaching System: A Teacher Education Program," in Strategies for Teaching Exceptional Children, eds. E.L. Meyen, G.A. Verguson, and R.J. Whelan (Denver: Love Publishing Co., 1972), p. 83.

[8]Ibid.

[9]Title 34, CFR 300.346.

[10]34, CFR 300.349.

[11]Title 34, CFR 300.601.

[12]Title 34, CFR 300.534 and .346.

[13]Title 34, CFR 300.135, .143, .146, .232, .233 and .601.

[14]Title 34, CFR 300.601 (b) (1).

[15]Federal Compliance Review Report, Federal Office of Special Education, Department of Education, November, 1980.

[16]Richard A. Schmuck, "School Self-Renewal Through Process Consultation," Theory Into Practice XVIII (April, 1979), pp. 59-62.

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[19]Public Law 94-142, The Education for All Handicapped Children Act, (1975).

[20]Richard P. Iano, "Education Theory and Evaluation Criteria," Exploring Issues in the Implementation of P. L. 94-142: Developing Criteria for the Evaluation of Individualized Education Program Provisions, published by Research for Better Schools, Inc., Bureau of Education for the Handicapped, Philadelphia, (1979), pp. 63-110.

[21]Hill M. Walker, "The Individualized Educational Program (IEP) as a Vehicle for Delivery of Special Education and Related Services to Handicapped Children," Exploring Issues in the Implementation of P. L. 94-142: Developing Criteria for the Evaluation of Individualized Education Program Provisions, published by Research for Better Schools, Inc., Bureau of Education for the Handicapped,Inc., Philadelphia, (1979), pp. 111-186.

[22]Patricia H. Gillespie, "A Planned Change Approach to the Implementation of the IEP Provision of P.L. 94-142," Exploring Issues in the Implementation of P. L. 94-142: Developing Criteria for the Evaluation of Individualized Education Program Provisions, published by Research for Better Schools, Inc., Bureau of Education for the Handicapped, Philadelphia, (1979), pp. 187-260.

[23]Linda G. Morra, Project Officer, Exploring Issues in the Implementation of P. L. 94-142: Developing Criteria for the Evaluation of Individualized Education Program Provisions, published by Research for Better Schools, Inc., Bureau of Education for the Handicapped, Philadelphia, (1979), pp. 5-12.

[24]Theodore G. Alper, "Individualized Educational Plans, How Well Do They Work?", (Sacramento, Ca., State Department of Education Grant No. 77-37-B, 1978).

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[27]Los Angeles Unified School District, Are Pupils in the Master Plan Receiving the Services Indicated on Their IEPs? Division of Special Education, Planning and Development Unit, Los Angeles, 1980.

[28]Paula A. B. Szabo, "The Effects of Professional Role, and Type and Degree of Handicapping Condition on the Perceived Importance of Evaluative Data," (Ph.D. dissertation, University of Connecticut, 1979).

[29]Susan Jane Schenck, "The Relationship Between the Psycho-educational Assessment and the Development of Long-Term Goals and Short-Term Instructional Objectives in the Individualized Educational Program," (Ph.D. dissertation, University of Connecticut, 1979).

[30]Emmala Evins Barnett, "An Investigation into the Academic Achievement of Learning Disabled Students as a Function of the Presence or Absence of the Individual Education Plan (IEP) Mandated by Public Law 94-142," (Ph.D. dissertation, University of South Carolina, 1979).

[31]Title 34, C.F.R. secs 300.343(d) and 121a.344 (1977).

[32]Title 34, C.F.R. sec. 300.533(1) (1977).

[33]Title secs. 300.305 and 121a.306 (1977).

[34]Title 34, C.F.R. sec. 300.5 (1977).

[35]Title 34, C.F.R. secs. 300.340 and 300.346 (1977).

[36]Title 34, C.F.R. secs. 300.531, 300.532, 300.533, 300.344 (1977).

[37]Robert F. Mager, Preparing Instructional Objectives (Belmont, Ca.: Fearon Publishers, 1962), p. 5.

[38]Webster's New Collegiate Dictionary (1976).

[39]Title 34, C.F.R. sec. 300.346 (1977).

[40]Title 34, C.F.R. secs. 300.5, 300.14, 300.122 (1977).

[41]1975 County-wide Census, Santa Clara County Planning Department.

CHAPTER II

METHODS OF THE STUDY

Introduction

This study evaluated the individualized education program (IEP) process by investigating and observing instructional settings, interviewing IEP service providers, and reviewing student records. A survey was administered to provide various sources of information to indicate whether the IEP process was functioning as intended.

Procedures

Overview

An advisory team of nine members was selected from the participating school districts to represent program specialists, special education teachers, administrators and parents to review the instruments and procedures to make recommendations to the research team. The group met before and after the field study to evaluate the process.

A second advisory team of three experts in the areas of research, survey design, evaluation, IEPs, and Public Law (PL) 94-142 reviewed the initial data collection instruments. A pilot study was conducted to address the reliability of the instrumentation.

Data was then collected, recorded and analyzed by usinginvestigation instruments and record review instruments. Data summary forms provided matching data that were used to answer the research questions. (See Figure 2.)

Development of data collection instruments	Review by an Advisory Team	Review by a team of experts	Pilot Study	Data Collection (Investigation Instruments, Record Review Instruments, and Data Summary Forms

Figure 2. Design of the Study

Data collectors used questionnaire, interview, observation, and review techniques at school sites to assure a high rate of response. They investigated assessment data, IEPs, and implemented programs. Data collector bias was lessened by having them complete questionnaires, interviews, and observations before reviewing the IEP and assessment information in the students' records. Information was recorded using a structured format to allow matching comparisons of the data collected. Responses were reported in summary statements as well as by individual item. Items were included within the instruments to examine possible factors which might have accounted for the results obtained.

Ninety students from Santa Clara County were randomly selected from nine participating school districts for examination of their IEPs. The sample was stratified by age level (elementary and secondary), major area of handicap (communicatively, physically, learning, and severely), and date of placement in special education. Following the development of the instrumentation and the pilot study activities, the data was collected during a six week period. Data was then analyzed to answer the research questions.

Description of Instruments

Instruments were specifically designed for this descriptive survey to allow for the analysis of the IEPs written by annual review teams and multidisciplinary teams through investigations and interviews within the school setting. The advisory team of three experts from the special education field reviewed materials developed for two types of data collection: (1) record review, and (2) investigation, using questionnaire, interview, and observation techniques. Data summary forms were developed to assist with matching analyses of the data collected.

Record Review Instruments Instruments were developed to collect information on IEPs from student files and records. Appendix A includes the IEP Compliance Review, The IEP Quality Review questionnaires on which data was recorded from the IEP, and the Multidisciplinary Team Assessment Review recorded from the IEP. Compliance and quality instruments were developed to analyze the components of the IEPs in terms of legal requirements and practices recommended by law or by the profession. The record review instruments were used to identify differences between the IEPs written by multidisciplinary teams and those written by annual review teams.

Investigation Instruments These instruments were developed to collect information on the implemented program and on the perceptions of service providers, parents, and students concerning the IEP process. Appendix B includes the Service Providers Questionnaire, the Service Providers Interview, Parent Questionnaire, and Student Interview.

The Service Providers Questionnaire was completed by each person furnishing components of the student's educational program. Regular and special education personnel completed this questionnaire. The first person to receive the questionnaire for every IEP reviewed was identified by the district as the person primarily responsible for the students IEP. Other staff members were presented with the questionnaire when they were identified by other persons as providing additional services to the student. This information was used to analyze the characteristics of the implemented program in terms of total educational services provided and the opinions of the service providers by role. The services, materials, and equipment information

was verified during administration of the Service Providers Interview by the data collectors.

Each person receiving the Service Providers Questionnaire was interviewed using the Service Providers Interview. The interview questions were designed to show the data collector evidence of services, materials and equipment provided for the student in question in the implemented program. Verified information was recorded and used to analyze the characteristics of the implemented program and to match with information provided by the Service Providers Questionnaire and the record review instruments.

Parents were mailed the questionnaire and asked to return it to the student's teacher. Reminder notices and phone calls were used to encourage return of the questionnaire.

Students who signed their IEPs were judged to be appropriate for interview. Those interviews were conducted after the review of the student's records.

Data Summary Forms Summary forms were developed to transfer specific information from other instruments to allow for matching of the curriculum content areas. Appendix C includes the Curriculum Area Summary Form, Matching Data Summary Form, and Keypunch Summary Form. Information to be matched included: multidisciplinary team IEP assessment; annual review team IEP assessment; IEP objectives; IEP lists of services, materials, and equipment; and implemented program services, materials, and equipment.

The "Santa Clara County Special Education Curriculum Framework"[1] was used to establish a generic classification system to sort and identify curriculum content for matching purposes in the areas of IEP assessment; IEP objectives; IEP services, materials, and equipment; and implemented classroom program services, materials and equipment. The curriculum classifications were used to compare assessment information to written program design and also to determine if those same curriculum classifications were present in actual classroom practice. The "Santa Clara County Special Education Curriculum Framework" was developed by a large county-wide multidisciplinary group. The framework is widely used in Santa Clara County and is gaining in acceptance and use in other parts of the United States. Although another similar type of framework could have been selected, this one was chosen because of its acceptance in Santa Clara County. Appendix D contains a copy of part of the

framework. The framework provided 40 broad descriptors of curriculum areas for classification of data and over 250 subclassifications and competency statements to suggest and define curriculum areas.

The IEP Study Curriculum Area Summary Form was developed to record information by curriculum area from the record review instruments and the investigation instruments. Numerical codes were recorded for matching on the IEP Study Matching Data Summary Form and the total number of curriculum areas were recorded on the IEP Study Keypunch Summary Form.

The IEP Study Matching Data Summary Form was designed to record matches and no matches between each curriculum area and category or column of information recorded on the IEP Study Curriculum Area Summary Form. The matches and no matches were recorded and totals were recorded on the IEP Study Keypunch Summary Form.

The IEP Study Keypunch Summary Form was developed to combine the information from the other data summary forms for data processing. The number of curriculum areas by curriculum category and source, as well as the total number of matches, no matches, and their ratio was recorded. These data were used to compare data and by multidisciplinary teams and annual review teams.

Pilot Study

Overview Before executing the study, six areas were addressed through a pilot study. Three areas concerned data collection instruments and three concerned the application of those data collection instruments. Following training in the use of the instruments, procedures and design of the study, the four data collectors were assigned to a pilot study population of eight students from a separate sample. Each data collector completed each step of the study for three students. Two out of three students were also evaluated by one other data collector to check reliability. (See Figure 3.)

Data Collector	Student
A, B	#1
A	#2
D	#3
A, C	#4
B	#5
B, D	#6
C, D	#7
C	#8
Total Number	8

Figure 3: Pilot Study Assignment

The pilot study addressed the following questions:

Instruments

1. Do assessment and IEP forms lend themselves to providing information that can be recorded on the instruments?
2. Can the information collected be recorded, processed, and analyzed in the format presented?
3. Do instruments provide desired information?

Application

1. Does the sequencing of the review and interview/observation processes affect the outcome?
2. To what extent does reliability exist between data collectors?
3. Does the data collection design meet existing requirements of the school and service provider?

Of the eight students chosen for the pilot sample five were male and three were female, five elementary school students and three secondary school students. Three students were communicatively handicapped, four learning handicapped and one physically handicapped. Eight teachers at eight schools, including one private school, were identified by the district as having primary responsibility for these students' IEPs.

Data Analysis The validity of the instrumentation was established by selecting and revising appropriate items from existing evaluation instruments and materials and having them reviewed by the advisory team of three experts. The materials were developed following a review of similar materials, criterion tests, and evaluations that were available. Items were selected from existing sources or written to provide appropriate information in relation to the research questions. Members of the advisory team held managerial roles with primary responsibility in the areas of research, survey design, evaluation, IEPs and PL 94-142. The members of the team were given the materials separately for independent review. Revisions then were made and the advisors again reviewed the materials until full approval was received from each member on the complete set of instruments. This provided assurance that the content and design of the instrumentation would produce valid data related to the IEP process.

Standard tests were used to test the reliability of the instruments. For consistency, all items on all instruments were numerically coded so that a higher score on any item was always more favorable. Tentative composites of items within each instrument were created in order to make the amount of information manageable by grouping items which seemed to measure the same general idea, concept, or category. Groupings in these composites were based largely on judgments about which items seemed to go together conceptually and seemed to elicit the same type of information (such as opinions or judgments). (See Appendix E, Table 20.) Reliability indices for all instruments were computed. Two types of reliability coefficients were computed: internal consistency and interrater agreement.

Internal consistency coefficients (standardized alphas) were computed to help answer the question: How interrelated are the items in each of the composites, that is, how well do the items in each composite "hang together" in measuring the same concept, idea, or category? Adequately large alphas in the pilot study would demonstrate that the use of these composite scores, rather than each individual item, would be justified for the larger study. (See Table 1).

Table 1
Internal Consistency Reliability

IEP Composite	Number of Items[a]	Maximum Possible Score	X	S.D.	Reliability Coefficient[b]
Compliance Review[c]					
Statements	10 (11)	32	27.75	4.95	0.84
Members	6	12	6.75	3.65	0.82
Compliance Total	16 (17)	44	32.50	5.63	0.74
Quality Review[c]					
IEP Assessment	5	. .[d]	11.00	4.72	0.78
IEP Services	2 (4)	10	9.38	2.33	0.00
IEP Goals	2 (7)	10	8.38	2.92	0.75
IEP Quality Total	10 (16)	. .[d]	28.75	6.61	0.76
Multidisciplinary Team[c]					
Team Total	12 (17)	20	5.75	3.24	0.81
IEP Process	7(8)	23	15.84	7.37	0.83
Service Provider Questionnaire[e]					
IEP Implementation	5 (6)	17	11.37	3.90	0.57
IEP Total	12 (14)	40	27.21	10.79	0.88
Parent/Guardian Questionnaire[f]					
IEP Process	5	23	16.60	5.13	0.57
IEP Implementation	2	10	8.40	2.30	0.99
IEP Total	7	43	28.20	6.14	0.63
Student Interview[g]					
IEP Process	5 (6)	25	9.50	4.22	0.77
IEP Implementation	5 (6)	25	13.60	4.81	0.93
IEP Total	10 (12)	50	23.10	8.49	0.93

[a]Number in parentheses is the number of items initially in the composite. Items which had zero variance were not included in the computation of the reliability coefficient.

[b]Standardized alpha coefficient.

[c]Based on a sample of 8 students' IEPs reviewed by 1 of 4 data collectors.

[d]Included some open-ended items; maximum possible score not specifiable.

[e]Based on a sample of 19 service providers.

[f]Based on a sample of 5 parents/guardians.

[g]Based on a sample of 10 students.

Interrater agreement indices (average percent of agreement between data collectors across items and students) were computed for clusters of items that required data collectors to record information from IEPs and Service Provider Interviews. These interrater agreement indices helped answer the questions: Do different data collectors agree on information they record from the same student's IEP? Does the information on the IEP lend itself to being consistently recorded by different data collectors? Do the record review instruments lend themselves to the consistant recording of information from IEPs by different data collectors? Did the training provided to data collectors successfully help them locate and evaluate information in the IEPs in the same way? Do the data collection strategy and data collection instruments lead to reproducible results among different data collectors? Adequately large interrater agreement indices in the pilot study would assure that the use of only one data collector per student in the larger study was justifiable; that is, results obtained would not be specific to that one data collector, other data collectors' judgments would tend to concur. (See Table 2.)

Table 2
Interrater Reliability

Composite	Number of Items	Interrater Agreement Range	Interrater Agreement Average
Compliance Review[a]			
Statements	10	0.75 to 1.00	0.90[b]
IEP Sources	2	. . . .	1.00[b]
IEP Members	6	0.75 to 1.00	0.95[b]
Compliance Total	18	0.75 to 1.00	0.95[b]
Quality Review[a]			
IEP Assessment	5	. . . .	0.95[c]
IEP Services	4	. . . .	0.50[c]
IEP Goals	7	. . . .	0.82[c]
Total Quality	16	. . . .	1.00[c]
Number & Types of Curriculum Areas	8	0.50 to 1.00	0.63[b]
Number of Assessment Procedures	8	. . . .	1.00[b]
Types of Services	14	. . . .	1.00[b]
Amounts of Services	14	. . . .	1.00[b]
Settings	5	. . . .	1.00[b]
Number of Goals	7	0.75 to 1.00	0.93[b]
Number of Objectives	7	0.75 to 1.00	0.86[b]
IEP Members	17	0.75 to 1.00	0.95[b]
Multidisciplinary Team[a]			
Team Meeting	2	. . . .	1.00[b]
Team Members	15	0.75 to 1.00	0.88[b]
Team Total	17	0.73 to 1.00	0.90[b]
Summary Matching Data Form[d]			
Curriculum Area 1 Matches	1	None	1.00
Curriculum Area 2 Matches	1	None	1.00
Curriculum Area 3 Matches	1	None	1.00
Curriculum Area 4 Matches	1	None	1.00
Curriculum Area 5 Matches	1	None	1.00
Curriculum Area 6 Matches	1	None	1.00
Curriculum Area 7 Matches	1	None	1.00
Curriculum Area 8 Matches	1	None	1.00
Total	8	None	1.00
MA by OBJ	1	None	1.00
MA by IEP S/M/E	1	None	1.00
MA by PROG S/M/E	1	None	1.00
OBJ by IEP S/M/E	1	None	1.00
OBJ by PROG S/M/E	1	None	1.00
IEP S/M/E by PROG S/M/E	1	None	1.00
Total	6	None	1.00

[a]Based on a sample of 4 students' IEP records, each reviewed by 4 data collectors.

[b]Averaged across items and students.

[c]Nonparametric correlations between total score on composite for 2 data collectors.

[d]Based on a sample of 4 students' IEP records, each reviewed by 4 data collectors.

Conclusions Although the small sample for the pilot study does not allow for generalization, some statistically significant data was obained. The pilot study provided data to indicate reliability and provided indications for the larger study. Internal consistency relability was good overall. Thirteen of seventeen internal consistency reliability coefficients were greater than 0.75. (Internal consistency reliability coefficients from the larger study were recomputed following the larger study to verify composites.) Interrater agreement indices were high. Almost all were 0.75 or above with many at 1.00. These data suggest that one data collector per student in the larger study is justified.

Preliminary and informal testing of some of the research questions to be assessed in the larger study was attemped. Although of no statistical significance, results indicated that: (1) the instruments do detect differences across students, that is, there is some variability in scores; and (2) some initial relation exists among IEP compliance review, IEP quality review, and matches. Overall, data collection strategy and instruments were reliable and suitable for tasks set forth in larger study.

Population

Nine school districts in Santa Clara County, California were approached for permission to conduct this study within their jurisdiction. All nine districts agreed to participate. Subjects were randomly selected in two phases.

In the first phase, a pool of two hundred students was randomly selected from an enrollment list of special education students with equal numbers of students in the four major areas of disability: communicatively handicapped, learning handicapped, physically handicapped, and severely handicapped. The pool also represented equal numbers of students in two age levels: elementary (under age 14 years 9 months as of September 1, 1980) and secondary (over age 14 years 9 months as of September 1, 1980.) Each district office was then asked to verify each student's date of admission to special education, date of birth, school, and teacher.

In the final phase, 108 students were randomly selected by date of admission to special education to form two representative groups. The students selected were from forty-nine schools including four private schools. The initial data provided by the districts indicated 65 teachers serving the identified population with some teachers providing services to more than one student in the sample. The sample contained 56 males and 27 females.

One group of the students had been placed in a special education program for the first time during the period of September 1, 1979 to January 31, 1980 and the second group was placed in a special education program for the first time during the period of February 1, 1980 to January 1, 1981. All other admission dates were eliminated prior to final selection. The first placement group had an initial IEP written by a multidisciplinary team and a second IEP written by an annual review team following the annual review not more than a year later. The second placement group had but one initial IEP written by a multidisciplinary team.

This sampling structure allowed for comparison of the two types of teams writing the IEPs while controlling for factors related to individual student differences by comparing IEPs written for the same student. This was achieved by selecting students who had IEPs written by both types of writing teams. Programs implemented from the written IEPs were also compared by the type of team who had written the IEP while controlling for factors related to the length of time following placement. The placement period of two years prior to the study was chosen to reduce other factors which might impact upon the information collected, such as student progress, teacher effectiveness, and program changes, among others. Students failing this selection criteria were eliminated.

Parent permission for inclusion in the study was obtained, including permission to discuss the IEP with the student's teachers and to review the student's file. Parent permission could not be obtained for 18 students, leaving a study group of ninety students. (See Table 3.)

Table 3
Study Sample

Handicapping Area	N	%
Communicatively	23	26
Learning	39	43
Physically	19	21
Severely	9	10
Total	90	100

In the area of severely handicapped the total enrollment from the nine school districts was small (twenty-four) and all students with appropriate placement dates from whom parent consent could be obtained were used. This resulted in an N of nine students which was 37.5% of the actual existing severely handicapped population in the participating districts. Since the severely handicapped population represents less than 0.5% of the total student population in Santa Clara County, this resulting sample indicates that the severely handicapped students included in the study were representative of the severely handicapped population.

The communicatively handicapped population represented 38.5% of the county's special education population and the sample represented 1.5% of the actual existing communicatively handicapped population in the participating districts.

The learning handicapped population represented 50.7% of the county's special education population and the sample represented 1.2% of the actual existing learning handicapped population in the participating districts.

The physically handicapped population represented 6.3% of the county's special education population and the sample represented 25% of the actual existing physically handicapped population in the participating districts.

The sample included 51 elementary level students (57%) and 39 secondary level students (43%). The age range was from four years to 20 years with a mean age of 12.9 years.

There were 27 students with two IEPs and 63 with only an initial placement IEP.

Although this sample was representative of students from the four handicapping areas, the sample (see Table 4) was not selected to be representative of the school district population or the general education population (see Table 5.) This sample can be generalized to other populations of similar descriptions. Tables 6 and 7 provide information concerning the general population of Santa Clara County by school district. Tables 8 and 9 provide student data by school district in Santa Clara County.

Table 4
Sample by District

School District	Sample	Percent of Sample
Cambrian	3	3
Campbell Union	5	6
Campbell Union High	13	14
Los Gatos Joint Union High	6	7
Los Gatos Union	9	10
Moreland	3	3
Santa Clara Unified	38	42
Saratoga Union	5	6
Union	8	9
TOTAL	90	100

Table 5
Total Enrollment by School District[2]

School District	Total Enrollment	Percent of Districts
Cambrian	2,334	4.5
Campbell Union	6,057	11.7
Campbell Union High	10,750	20.8
Los Gatos Joint Union	3,685	7.1
Los Gatos Union	2,426	4.7
Moreland	4,133	8.0
Santa Clara Unified	15,148	29.0
Saratoga Union	2,053	4.0
Union	5,167	10.0
TOTAL	51,753	100.0

Total enrollment for all 33 school districts in Santa Clara County: 237,806

Table 6
Santa Clara County General Population and Income Range[3]

School District	Population	Median Income
Cambrian	24,270	$14,000-15,999
Campbell Union	NA	NA
Campbell Union High	65,593	12,000-13,999
Los Gatos Joint Union High	NA	NA
Los Gatos Union	23,312	14,000-15,999
Moreland	48,442	14,000-15,999
Santa Clara Unified	102,353	12,000-13,999
Saratoga Union	18,627	24,000-29,999
Union	42,282	16,000-17,999
24 others	844,197	. . . .
TOTAL for County	1,169,006	$14,000-15,999

Table 7
Santa Clara County General Population
Race or Cultural Background[4]

School District	% White	% Hispanic	% Black	% Asian
Cambrian	87	5.0	1.0	1.3
Campbell Union	NA	NA	NA	NA
Campbelll Union High	87	4.9	1.0	2.3
Los Gatos Joint Union High	NA	NA	NA	NA
Los Gatos Union	93	1.4	0.09	1.0
Moreland	91	3.3	0.6	2.8
Santa Clara Unified	80	10.0	1.0	2.0
Saratoga Unified	95	1.0	0.1	1.9
Union	88	5.0	0.5	1.5
24 others	. .	. .	. .	. .
Percent for County	77	1.6	2.5	2.5

Table 8
Santa Clara County School District Student Population
Race or Cultural Background[5]

School District	% White	% Hispanic	% Black	% Asian
Cambrian	82	12	1.0	5.0
Campbell Union	81	10	3.0	6.0
Campbell Union High	88	6.0	1.0	5.0
Los Gatos Joint Union High	95	2.0	-	-
Los Gatos Union	93	2.0	1.0	4.0
Moreland	85	5.0	2.0	8.0
Santa Clara Unified	70	17	2.0	8.0
Saratoga Union	93	1.0	1.0	5.0
Union	88	6.0	2.0	3.0
24 others	. .	. .	. .	. .
Total for County	66	21.0	5.0	6.0

Table 9
Santa Clara County Special Education Enrollment by District[6]

School District	Special Education Enrollment	% Special Education Enrollment
Cambrian	377	16.6
Campbell Union	798	13.2
Campbell Union High	625	5.8
Los Gatos Joint Union High	202	5.5
Los Gatos Union	356	14.7
Moreland	589	14.3
Santa Clara Unified	1,125	7.4
Saratoga Union	378	18.4
Union	940	18.9
24 others	25,257	. .
TOTAL for County	20,647	8.7

Data Collection

Data was collected during a six-week period in the spring of 1981 at 49 schools in Santa Clara County. Four trained data collectors spent approximately four hours per student issuing questionnaires, interviewing staff, and reviewing student records. Each teacher, specialist, or other person providing service or instruction to the student was asked to complete a questionnaire and then was interviewed. Parents were surveyed and students interviewed. Responses were used as triggers for further inquiry and examination into such components as materials, equipment, attendance records, and lesson plans which indicated and documented the services and instruction provided. After the investigation of the implemented program was completed, a review of student records was conducted to examine assessment data and the written IEP. The data collectors used structured item and summary forms to record and match data responses.

Data Analysis

Demographic characteristics of the sample were described by frequency and percentage to indicate similar populations to which these findings can be generalized. Composites of items within instruments were created to reduce the amount of information. Internal consistency reliability was established by using standardized alpha coefficients for each composite within each instrument. Relationships among composites within and across instruments were identified using the Pearson Product Moment Intercorrelation Matrix. Redundant information sources were explored using Stepwise Multiple Regression to identify the smallest set of items that would predict the variance described. The amount of congruence between and among IEP assessment, IEP objectives, IEP services, implemented program services, and type of team writing the IEP was established by computation of means and standard deviations. Weaknesses in the sequence of events in the IEP process were analyzed using ANOVA followed by a priori contrasts to determine whether there are significant differences in congruences. A chi-square test was used to measure the differences in the multidisciplinary team and the annual review team composition by the presence or absence of each type of member of the team by role. Differences in congruence between the IEPs written by multidisciplinary teams and IEPs written by annual review teams were assessed by t-tests. Differences in compliance and quality review characteristics between IEPs written by both types of teams were distinguished using the Two-Group Stepwise Discriminant Analysis. The ANOVA score and pairwise comparisons for each Service Provider Questionnaire composite were used to identify the opinions of the service provider by role. Finally, the multivariate ANOVA, univariate ANOVA, and chi-square tests were used to analyze the demographic characteristics of the student with the characteristics of the IEP and the implemented program. See Appendix E where Table 21 more specifically describes the analysis. In Appendix E Table 22 shows cross-lists of the analyses by instruments.

Products and Activities

Following the completion of the field study the items were review by both advisory teams resulting in a slight modification in the questions. Modifications were made in format and style by the research team, and then preparation for dissemination activities was undertaken.

Products of this study included:

1. IEP MAP Instruments
2. IEP MAP Instructional Manual
3. Final Report of the Field Study
4. IRIC Micro Film Library Access
5. Project and Workshop Pamphlet Mailed to special education administrators (two times to 1,500 persons)
6. Newsletter Release Announcing Workshops (two to 160 sources)
7. Three Dissemination Workshops (San Francisco, Los Angeles, and San Diego)
   a. Instructional Manual
   b. Master Copy of Instruments
   c. Group Training
   d. Personal Consultation
   e. Data Analysis Plan
   f. Keypunch Instructions
   g. Computer Program Instructions (SPSS)
   h. Criteria for Drawing Conclusions
   i. Santa Clara County Special Education Curriculum Framework

CHAPTER II
FOOTNOTES

[1]Nadine Coates, "Santa Clara County Special Education Curriculum Framework," (San Jose, CA, Office of the Santa Clara County Superintendent of Schools, 1977).

[2]Data Regarding Schools of Santa Clara County, Office of the Santa Clara County Superintendent of Schools, September 1980.

[3]1975 County-wide Census, Santa Clara County Planning Department.

[4]Ibid.

[5]Race and Ethnic Data Santa Clara County Schools, Office of the Santa Clara County Superintendent of Schools, fall 1979.

[6]Special Education Enrollment in Santa Clara County, Office of the Santa Clara County Superintendent of Schools, February 1980.

CHAPTER III

FINDINGS

Introduction

Difficulty in obtaining parent permission reduced the sample from 108 to 90 students. The 90 students selected yielded questionnaires and interviews from 209 service providers, 52 parents, and 11 students, data from 117 IEPs, and descriptions of 90 implemented programs.

The amount of information was reduced by creating reliable composites (scales) within each Record Review and Investigation Instrument. Table 10 shows that all the reliability coefficients resulting from the Internal Consistency Reliability Analyses for all the scales within every instrument are satisfactory. Fourteen of seventeen reliability coefficients are .70 or greater. The other three reliability coefficients are all above .61. These moderate to high reliabiltiy coefficients suggest that each of the scales includes a homogeneous set of items, i.e. items within each scale are measuring the same construct. Therefore the use of these scales

(rather than individual items) in the subsequent analyses is justifiable. In addition the examination of the scale means and standard deviations show there is across subject variability in scores on each scale, indicating the scales can detect between subject differences. Since the scale means are well below the maximum possible score for each scale, the scales do not demonstrate the problem of a "ceiling effect" (e.g. most respondents answering every item in the most favorable way). Almost all the total item correlations are positive. That is, a high score on any one item is related to a high score on the total scale; items within each scale are discriminating among subjects in a consistent direction.

Table 10

Results of Internal Consistency Reliability Analyses of Scales within Each Record Review and Investigation Instrument

Instrument	Scale	Number of Items	Maximum Possible Score	Scale Mean	Scale S.D.	Alpha Reliability Coefficient
Service Provider Questionnaire (n=209)	IEP Process	7	23	12.91	7.52	.86
	IEP Implementation	4	19	12.97	5.01	.66
	IEP Total	11	42	26.88	11.67	.85
Compliance Review (n=90)	IEP Statements	9	27	23.48	3.53	.71
	IEP Members	4	4	2.57	.97	.61
	Compliance Total	14	32	26.49	3.95	.70
Quality Review (n=90)	IEP Assessment	5		10.43	5.43	.73
	IEP Services	4	18	14.39	4.10	.83
	IEP Goals	7	35	26.52	7.85	.86
	Quality Total	16		51.34	13.44	.86
Multidisciplinary Team Assessment Review (n=90)	Team Total	3	17	4.66	3.03	.93
Student Interview (n=12)	IEP Process	7	19	12.92	3.75	.66
	IEP Implementation	6	22	14.25	7.24	.87
	IEP Total	11	39	22.00	7.52	.78
Parent/Guardian Questionnaire (n=52)	IEP Process	5	22	15.96	5.53	.73
	IEP Implementation	2	10	7.98	2.84	.98
	IEP Total	7	32	23.94	7.93	.86

Note. Items with zero variance were not included in the computation of the reliability coefficient.

The Pearson Product Moment Correlation matrix of every scale with every other scale indicated the correlations of scales within instruments were generally larger than the correlations of scales across different instruments. This was to be expected because the same respondents and raters completed the same scales within any set of instruments, but different raters completed the scales across different instruments. Although some of the correlations of scales within an instrument are statistically significant, the absolute magnitude of these correlations is small enough to justify the use of separate scales, i.e. the scales within an instrument are measuring something different (e.g. the Compliance Review Statements scale correlates .31 with the Compliance Review Members scale). This correlation is statistically significant, yet small enough (much less than the square root of the reliability of either instrument) to maintain statements and members as two separate scales. The Service Provider Questionnaire scales show near zero correlations witn the Compliance Review and Quality Review, indicating that the opinions of service providers about the IEP process and the IEP implementation bear little relation to the objective evidence in the student's file. The Compliance Review and Quality Review scales are moderately to highly related.

The Stepwise Multiple Regression was used to identify the smallest set of scales that are maximally related to the total percent of matches. The matrix shows that the single best predictor of total matches is the goals scale of the quality review, (i.e. those seven items that describe the adequacy of the goals and objectives for the student and how well they have been specified). All the correlations of scales with total matches are positive, except the correlations of the team total scale of the Multidisciplinary Team Review with total matches, and the members scales of the Compliance Review scale with the total matches. These negative correlations were near zero and not statistically significant. (See Table 11.)

Table 11

Pearson Product Moment Correlations of All Instrument Scales

Stepwise Multiple Regression of Total Percent of Matches on Quality Review, Compliance Review, Service Provider Questionnaire, MA Team Assessment Review, & Parent Questionnaire Scales[1]

	X169	STATE	MEMBERS	COMPTOT	ASSESS	SERVICES	GOALS	QUALTOT	TEAMTOT	PARPROC	PARIMPL	PARTOT	X11	X12	X13
X169	1.00	0.32	-0.03	0.28	0.21	0.19	0.53	0.45	-0.04	0.09	0.09	0.09	0.04	0.09	0.07
STATE		1.00	0.21	0.96	0.60	0.63	0.53	0.74	0.10	0.24	0.24	0.24	0.11	0.07	0.11
MEMBERS			1.00	0.49	0.22	0.06	0.05	0.13	0.46	0.17	0.17	0.17	-0.18	0.02	-0.11
COMPTOT				1.00	0.60	0.58	0.49	0.71	0.30	0.27	0.27	0.27	0.05	0.07	0.07
ASSESS					1.00	0.28	0.34	0.68	0.32	0.25	0.25	0.25	0.22	0.27	0.27
SERVICES						1.00	0.49	0.70	0.11	0.07	0.07	0.07	0.05	-0.07	-0.00
GOALS							1.00	0.87	0.02	0.01	0.01	0.01	-0.05	0.05	-0.00
QUALTOT								1.00	0.18	0.13	0.13	0.13	0.08	0.12	0.11
TEAMTOT									1.00	0.16	0.16	0.16	0.13	0.31	0.23
PARPROC										1.00	1.00	1.00	0.29	0.04	0.20
PARIMPL											1.00	1.00	0.29	0.04	0.21
PARTOT												1.00	0.29	0.04	0.20
X11													1.00	0.60	0.92
X12														1.00	0.86
X13															1.00

[1]Regression analysis based on a sample size of 50. A correlation coefficient of .27 or greater is significant at the .05 level.

When the predictor variables (scales) are entered in the order described, the results in the summary Table 12 suggest that the Quality Review and Compliance Review scales alone account for most of the variance in total matches. The values in the "R Square" column are directly interpretable as the proportion of variance in the criterion variable (total matches) accounted for by the predictor variables (scales). The Compliance Review scales account for 12% of the variance; the Quality Review scales account for an additional 19% of the variance; and all the other instruments combined account for only an additional 1% of the variance. All the instruments except the Compliance and Quality Review instruments could be dropped without losing any significant or unique information about the IEP process or the IEP implementation. The Quality Review instrument, specifically the goals scale, is a better predictor of total matches than the Compliance Review instrument.

Table 12

TOTAL % MATCHES BY SOURCE SUMMARY TABLE

COMPOSITE[a]	MULTIPLE R	R SQUARED	R SQUARED CHANGE	SIMPLE R	BETA
COMPLIANCE REVIEW STATEMENTS	0.32	0.11	0.11	0.32	0.14
COMPLIANCE REVIEW MEMBERS	0.34	0.12	0.01	-0.03	-0.07
QUALITY REVIEW ASSESSMENT	0.34	0.12	0.00	0.21	-0.02
QUALITY REVIEW SERVICES	0.34	0.12	0.00	0.19	-0.14
QUALITY REVIEW GOALS	0.55	0.31	0.19	0.53	0.53
MA TEAM REVIEW TEAM TOTAL	0.55	0.31	0.00	-0.04	-0.05
SERVICE PROVIDERS TOTAL MEAN ON SPQ TOTAL	0.56	0.31	0.00	0.07	0.14
PARENT PROCESS	0.56	0.31	0.01	0.09	0.09
SERVICE PROVIDERS PROCESS MEAN ON SPQ IEP PROCESS	0.56	0 31	0.00	0.04	-0.10

[a]Regression analysis is based on a sample size of 50. The first two composite scales entered the regression equation first, then the next three. A correlation of coefficient of .27 or greater is significant at the .05 level.

Data For Research Question 1

Is there congruence for special education students among the factors of: IEP assessment, IEP objectives, IEP services, materials and equipment, implemented program services, materials and equipment? The data indicate 69.4% total match for the four factors. The mean scores for match and mis-match indicate similar incidence of match (16.4) and mis-match (16.2). The results of ANOVA show that there are statistically significant differences in the percent of matches by the different types of matches. The mean values reported indicate that the percent of matches is lowest for Objectives by Program Services/Materials/Equipment (60.0%) and highest for Assessment by IEP Services/Materials/Equipment (76.8). (See Table 13.)

Table 13
ANALYSIS OF VARIANCE FOR REPEATED MEASURES ON THE SET OF % OF MATCHES

Type of Match	Means	STD DEV	F-ratio
% MATCHES MA BY OBJ	60.33	36.52	7.19*
% MATCHES MA BY IEP S:M:E	76.81	33.36	
% MATCHES MA BY PROG S:M:E	64.20	35.71	
% MATCHES OBJ BY IEP S:M:E	70.89	36.14	
% MATCHES OBJ BY PROG S:M:E	59.96	36.81	
% MATCHES IEP BY PROG	73.71	35.90	
TOTAL % MATCHES BY SOURCE	69.37	25.90	

Note: ANOVA based on a sample size of 90.

* p is less than .001

The results of the t-test show that in the chain of events of Assessment to IEP Objectives to IEP Services/Materials/Equipment to Program Services/Materials/Equipment, the weakest link is between Assessment and Objectives. There were an average of 60.3% matches between Assessment and Objectives as compared to 70.9% matches between Objectives and IEP Services/Materials/Equipment listed. This difference was

significant at the .002 level. On the other hand, there were no statistically significant differences between the two links of Objectives to IEP Services/Materials/Equipment and IEP Services/Materials/Equipment to Program Services/Materials/Equipment. (See Table 14.)

Table 14

T-TESTS FOR RELATED SAMPLES OF MEAN DIFFERENCES BETWEEN PAIRS OF % MATCHES

Pair	M	S.D.	t-ratio (df)
MA by OBJ	60.33%	36.52%	-3.26 (89)*
vs.			
OBJ by IEP S/M/E	70.89%	36.14%	
OBJ by IEP S/M/E	70.89%	36.14%	-.69 (89)
vs.			
IEP S/M/E by PROG S/M/E	73.71%	35.90%	

Note: t-tests are based on a sample size of 90.

* p is less than .002

Data For Research Question 2

When IEPs are written by multidisciplinary teams, is there more congruence among the factors of: IEP assessment, IEP objectives, IEP services, materials and equipment, implemented program services, materials and equipment than when IEPs are written by annual review teams? The chi-square tests of independence of the presence or absence of each type of member by role indicated that there were no statistically significant differences in the composition of the writing team between multidisciplinary teams and annual review teams. However, multidisciplinary teams were more likely than annual review teams to include a nurse on the writing team while annual review teams were more likely than multidisciplinary teams to include the student on the writing team.

Hotellings' T^2 was not statistically significant, suggesting that taken as a set, there are no significant differences in the percent of

matches between the IEPs written by multidisciplinary team and annual review teams. The means reported for the separate t-tests show that for every type of match, the percentage of matches was higher for the annual review team than for the multidisciplinary team. For two types of matches, Objectives by Program Services/Materials/Equipment and IEP Services/Materials/Equipment by Program Services/Materials/Equipment, the differences between the multidisciplinary team and the annual review team were statistically significant at the .02 level. (See Table 15.)

Table 15
T-TESTS FOR RELATED SAMPLES OF MEAN DIFFERENCES ON % MATCHES BETWEEN MA AND ARA TEAMS[1]

Type of Match and Group	Mean	Standard Deviation	t-ratio (df)
% MATCHES MA BY OBJ			
MA	59.37	38.63	-0.68 (26)
ARA	65.07	30.04	
% MATCHES MA BY IEP S:M:E			
MA	71.37	38.36	-0.44 (26)
ARA	74.44	35.48	
% MATCHES MA BY PROG S:M:E			
MA	60.89	40.95	-1.32 (26)
ARA	71.19	28.57	
% MATCHES OBJ BY IEP S:M:E			
MA	66.33	41.90	-0.18 (26)
ARA	68.52	34.29	
% MATCHES OBJ BY PROG S:M:E			
MA	48.52	39.41	-2.58 (26)*
ARA	72.07	30.08	
% MATCHES IEP BY PROG			
MA	55.74	44.90	-2.46 (26)*
ARA	81.22	29.81	
% MATCHES BY SOURCE			
MA	68.74	25.42	-0.61 (26)
ARA	71.89	22.87	

Note. Hotellings' T^2=14.45, F=1.945 (6,27), p is less than .12
t-tests based on sample size of 27 pairs

* p is less than .02

Data For Research Question 3

Do the compliance and quality characteristics of IEPs written by multidisciplinary teams differ from the compliance and quality characteristics of IEPs written by annual review teams? The means reported for the separate t-tests show that for every Compliance Review and Quality Review characteristic, the average scores for the annual review teams were higher than those for the multidisciplinary teams. The mean differences between multidisciplinary teams and annual review teams were statistically significant at or above the .02 level for the Compliance and Quality Review characteristics of: the statements scale of the Compliance Review (which records information about whether the IEP includes complete, partial, or no statements about the students's present level of performance, long range goals, objectives, duration of services, etc.); the Compliance Total Scale; and the number of services to be provided from the Quality Review Instrument. (See Table 16.)

Table 16
T-TESTS FOR RELATED SAMPLES OF DIFFERENCES BETWEEN
THE QUALITY REVIEW AND COMPLIANCE REVIEW CHARACTERISTICS
OF IEPs WRITTEN BY MA AND ARA TEAMS

Variable Group		Mean	Standard Deviation	t-ratio[1] (df)
STATEMENTS SCALE	MA	23.15	3.13	-2.46 (26)*
	ARA	24.85	2.20	
MEMBERS SCALE	MA	3.19	0.88	-1.14 (26)
	ARA	3.41	0.93	
COMPLIANCE TOTAL	MA	26.33	3.21	-2.48 (26)*
	ARA	28.26	2.54	
ASSESSMENT SCALE	MA	8.96	5.61	-1.56 (26)
	ARA	10.41	5.18	
SERVICES SCALE	MA	13.26	4.51	-1.83 (26)
	ARA	15.00	3.67	
GOALS SCALE	MA	25.60	8.52	-0.60 (26)
	ARA	26.63	4.27	
QUALITY TOTAL	MA	47.81	13.68	-1.67 (26)
	ARA	52.04	9.23	
TOTAL # ASSESSMENT PROCEDURES	MA	4.78	3.43	-1.68 (26)
	ARA	6.04	3.59	
# SERVICES TO BE PROVIDED	MA	1.33	0.73	-3.24 (26)**
	ARA	1.89	1.16	
TOTAL # GOALS		2.93	1.59	-0.66 (26)
		3.15	1.92	
TOTAL # OBJECTIVES		5.26	3.10	-1.14 (26)
		6.04	2.77	

Note. t-tests based on sample of 27 pairs

*p is less than .02

**p is less than .001

For almost all of the comparisons between IEPs written by the multidisciplinary team and the annual review team on specific Quality Review items, the mean of the annual review team is higher than the mean of the multidisciplinary team. Eight of the t-tests indicate that there was a statistically significantly higher mean for the annual review team on those items. The IEPs written by annual review teams included more curriculum areas, more assessment procedures, more listed services, more goals, more objectives, and better specified objectives than those IEPs written by multidisciplinary teams.

Chi-square tests indicated no statistically significant differences between IEPs written by multidisciplinary teams and annual review teams in terms of the types of service specified in the IEP. However, IEPs written by annual review teams were more likely than IEPs written by multidisciplinary teams to list the services of a special day class teacher (61% vs 39%) and regular education teachers (67% vs 33%). There were no statistically significant differences between the IEPs written by multidisciplinary teams and annual review teams in terms of the types of settings listed in the IEP. However, the IEPs written by annual review teams were more likely than IEPs written by multidisciplinary teams to specify a regular education setting (64% vs 36%).

IEPs written by multidisciplinary teams can be distinguished from the IEPs written by annual review teams. The stepwise discriminant analysis identified a set of 5 out of 18 possible discriminating variables that maximally statistically discriminate between IEPs written by multidisciplinary teams and annual review teams. (See Table 17.) The set of 5 discriminating variables included: percent of matches Objectives by Program Services/Materials/Equipment, Compliance Review Totals, Percent of matches Objectives by IEP Services/Materials/Equipment, total percentage of matches and the number of services listed on the IEP. The classification results show that by knowing the score on each of the 5 discriminating variables, an IEP can correctly be identified as having been written by either a multidisciplinary team or an annual review team 70% of the time for this sample. (See Table 18.)

Table 17
STEPWISE DISCRIMINANT ANALYSIS

DISCRIMINANT STEP ENTERED	VARS IN	WILKS' LAMSDA	SUMMARY TABLE SIG.	CANONICAL DISCRIMINANT FUNCTION COEFFICIENT
% MATCHES OBJ BY PROG S:M:E	1	0.90	0.02	0.60
COMPLIANCE REVIEW TOTAL	2	0.83	0.01	-1.17
% MATCHES OBJ BY IEP S:M:E	3	0.78	0.01	0.47
TOTAL % MATCHES BY SOURCE	4	0.76	0.01	-0.38
# SERVICES TO BE PROVIDED	5	0.74	0.01	-0.38

Table 18
CLASSIFICATION RESULTS

ACTUAL GROUP	CASES	1	2
GROUP 1 MULTIDISCIPLINARY	27	18 66.7%	9 33.3%
GROUP 2 ANNUAL REVIEW	27	7 25.9%	20 74.1%

PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED: 70.37%

Data For Research Question 4

Do the opinions of service providers concerning the IEP differ according to the type of team which had written the IEP? To help control for the fact that different types of service providers completed the questionnaire for different students and the number and types of service providers varied across students, differences in opinions about IEPs for different types of service providers were best studied by determining each type of service provider opinion relative to the opinions of other service providers for the same student. Deviation scores provide information about differences in opinons by types of service provider, while controlling for individual differerences across students' IEPs. Therefore the ANOVA was computed on z-scores for each service provider questionnaire scale: IEP Process, IEP Implementation, and IEP Total. Post hoc comparisons, using the Scheffe Multiple Ranges Test were computed to identify which pairs of service providers differed significantly.

The results of the ANOVA show that there are statistically significant differences among the group of service providers on all three Service Provider Questionnaire scales. Resource specialists and speech and language specialists had the highest means on all three scales. Regular education teachers were consistently among the lowest scores on all three scales. Whereas the ANOVAs showed whether there were any differences in Service Provider Questionnaire scales among the whole set of types of service providers, the post hoc comparisons showed which pairs of service providers differ significantly at the .05 level on the Service Providers Questionnaire scale scores. For the process scale, special day class teachers, resource specialists and speech specialists had significantly higher means than regular education teachers. Resource specialists and speech specialists also had significantly higher means than special education aides. For the implementation scale no significant means differences were found. On the total scale special day class teachers, resource specialists and speech specialists all had higher means than regular education teachers. (See Table 19.)

Table 19
ANALYSIS OF VARIANCE OF Z-SCORES ON SERVICE PROVIDER QUESTIONNAIRE SCORES BY ROLE OF SERVICE PROVIDER

GROUP	n	MEAN	STANDARD DEVIATION	SOURCE	MEAN SQUARES	F RATIO*
IEP PROCESS SCALE						
Special Day Class	31	0.18	0.66	BETWEEN GROUPS	4.15	9.69**
Resource Spec Pgm	28	0.66	0.61			
Regular Education	56	-0.51	0.63	WITHIN GROUPS	0.43	
Aides	17	-0.42	0.80			
Counselor	2	0.35	0.50			
Social Worker	2	-0.56	0.00			
Speech Specialist	30	0.53	0.54			
Nurse	1	0.00	.00			
Occptnl Therapist	1	0.43	.00			
Adaptive Phys Ed	21	-0.12	0.64			
Other	20	-0.23	0.82			
IEP IMPLEMENTATION SCALE						
Special Day Class	31	0.33	0.45	BETWEEN GROUPS	3.12	3.85**
Resource Spec Pgm	28	0.55	0.93			
Regular Education	56	-0.31	0.67	WITHIN GROUPS	0.83	
Aides	17	-0.19	0.72			
Counselor	2	-0.35	0.50			
Social Worker	2	-0.48	1.39			
Speech Specialist	30	0.39	0.12			
Nurse	1	-1.71	.00			
Occptnl Therapist	1	0.50	.00			
Adaptive Phys Ed	21	-0.34	1.20			
Other	20	-0.40	1.34			
IEP TOTAL SCALE						
Special Day Class	31	0.23	0.59	BETWEEN GROUPS	3.85	7.07**
Resource Spec Pgm	28	0.64	0.59			
Regular Education	56	-0.53	0.87	WITHIN GROUPS	0.54	
Aides	17	-0.30	0.72			
Counselor	2	0.35	0.50			
Social Worker	2	-0.83	0.53			
Speech Specialist	30	0.33	0.71			
Nurse	1	-1.23	.00			
Occptnl Therapist	1	1.00	.00			
Adaptive Phys Ed	21	-0.10	0.65			
Other	20	-0.19	0.87			

Note: *df for all F-ratios=10.20

**p is less than .001

The results of the t-tests revealed no significant differences between IEPs written by multidisciplinary teams and annual review teams in terms of service providers' opinions or parents' opinions. However, service providers' opinions were consistently more favorable towards the IEPs written by multidisciplinary teams than those written by annual review teams. On the other hand, parents were consistently more favorable toward the IEPs written by annual review teams than those written by multidisciplinary teams.

Data For Research Question 5

Do demographic variables affect the IEP characteristics of the IEP and/or the opinions of service providers with respect to: number of team members, types of specialists represented on the team, type of handicapping condition, age and ethnicity? There were no differences in the number of members of the IEP writing team whether the team was a multidisciplinary team or an annual review team. Both groups had a mean number of members near 3.90. Team members present ranged from zero (occurred two times) to eight (occurred two times), with 74.4% of the IEP writing teams having from three to six members. (See Figure 4.)

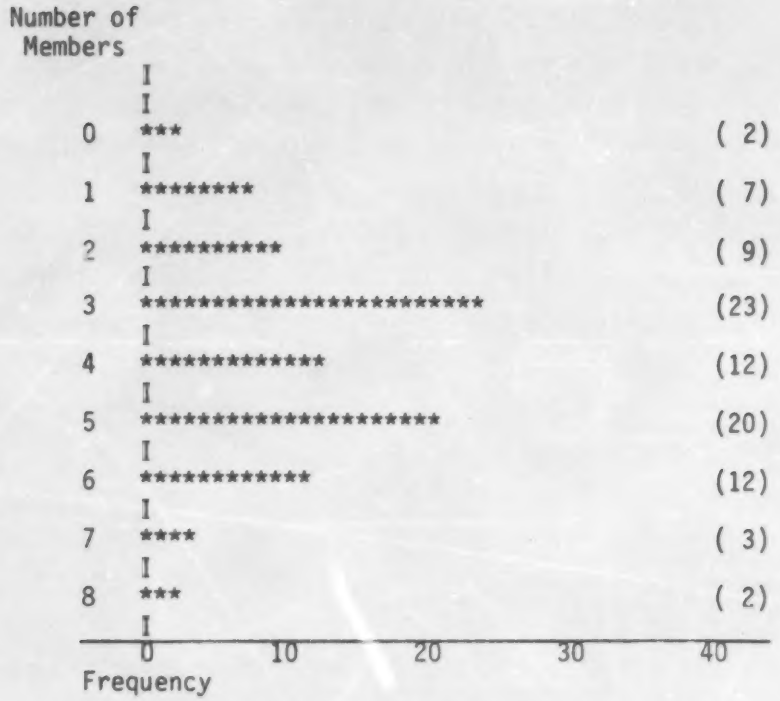

Figure 4: Frequency of Numbers of Members on the IEP Writing Team

There were no statistically significant differences between multidisciplinary teams and annual review teams in terms of the composition of the IEP writing team. However, multidisciplinary teams were more likely than annual review teams to include a nurse on the writing team while annual review teams were more likely than multidisciplinary teams to include the student on the writing team.

ANOVA by type of handicap was computed on each type of percentage of matches and on each Compliance and Quality Review scale. A post hoc comparison using Scheffe Multiple Ranges Test followed. No pattern of signifcant differences was noted indicating no differences exist. Significant differences were found on some individual items between various pairings of the four types of handicapping conditions, but the number of occurrences was nearly equal for each type of handicapping condition.

Differences between elementary and secondary students were examined by using t-tests on each type of percentage of matches and on each Compliance and

Quality Review scale. Although the elementary age group had higher mean scores in every instance, only five areas out of a possible eighteen tests showed significance above the .05 level. The services scale was the only item that was significant at the .001 level. No pattern was noted indicating that no significant difference was present due to age grouping.

The results of ANOVA show that there are no significant differences among ethnic groups in the percentage of matches among assessment, objectives, listed services, and program services actually provided. However, for every type of match, the mean was highest for the Black students and the standard deviation for Black students were also quite small compared to those of the other ethnic groups. Thus, the Black students fared best in terms of congruence among their assessment, objectives, listed programs and services, and implemented programs and services. The results of the post hoc comparisons among pairs of ethnic groups showed that most of the significant differences in percentages of matches between pairs were attributable to lower percentages of matches for White students. The results of ANOVA show that there are no significant differences among all ethnic groups in quality and compliance characteristics of the IEPs. There were also no consistent patterns in terms of which ethnic groups had the highest mean on all the scales; different ethnic groups fared best on different compliance and quality characteristics. The results of the post hoc comparison indicate that in most cases, significant differences between pairs of ethnic groups were due to lower means by White students on compliance and quality characteristics.

The chi-square test of the independence of ethnic group and handicap type was not significant. This suggests that ethnic groups were fairly comparable in terms of handicap type; the two variables were not confounded. The chi-square test of the independence of ethnic group and grade level (elementary or secondary) was significant. All Black students were secondary students, the majority of White students were elementary students, and slightly more Hispanic students were secondary than elementary students. Thus ethnicity was confounded with grade level; the effects of grade level and ethnicity on IEP characteristics cannot be distinguished.

Summary

This survey design study examined the effects on implemented programs of using multidisciplinary teams and annual review teams for the assessment of students and the writing of IEPs for special education students. Eleven composites from four instruments were formed to reduce the data in order to facilitate the interpretation of data. The 90 students selected yielded questionnaires and interviews from 209 service providers, data from 117 IEPs, and descriptions of 90 implemented programs. Internal Consistency Reliability Analyses for all the scales within every instrument were satisfactory. Nine of eleven reliability coefficients were .70 or greater. The other two reliability coefficients were .66 and .61. Quality Review and Compliance Review scales alone account for most of the variance in total matches. The Compliance Review scales account for 12% of the variance; the Quality Review scales account for an additional 18% of the variance; and all the other instruments combined account for only an additional 1% of the variance.

The congruences among the factors of IEP assessment, IEP objectives, IEP services, materials and equipment, implemented program services, materials and equipment was reported as 69.4% total match. The match between IEP Assessment and IEP Objectives was found to be 60.3%, while the match between IEP Objectives and IEP Services/Materials/Equipment was 70.9%. This discrepancy was significant at the .05 level.

When IEPs written by multidisciplinary teams and annual review teams are compared, in every factor matched the annual review team percentage was higher. For two factors matched, Objectives by Program Services/Materials/Equipment and IEP Services/Materials/Equipment by Program Services/Materials/Equipment, the differences between the multidisciplinary team and the annual review team scores were statistically significant at the .02 level.

Compliance and quality characteristics of IEPs written by multidisciplinary teams differed from the compliance and quality characteristics of IEPs written by annual review teams. Mean scores reported for the separate t-tests show that for every Compliance Review and Quality Review characteristic, the average scores for the annual review teams were

higher than those for the multidisciplinary teams. The mean differences between multidisciplinary teams and annual review teams were statistically significant at the .02 level or higher for the Compliance and Quality Review characteristics of: the statements scale of the Compliance Review (which records information about whether the IEP includes complete, partial, or no statements about the students's present level of performance, long range goals, duration of services, etc.); the Compliance Total Scale; and the number of services to be provided from the Quality Review Instrument. Discriminating variables allow the correct identification of the type of team writing the IEP with 70% predictability.

There were statistically significant differences in opinions among the groups of service providers on all three Service Provider Questionnaire scales. Resource specialists and speech and language specialists had the highest means on all three scales. Regular education teachers were consistently among the lowest scores on all three scales. For the process scale, special day class teachers, resource specialists and speech specialists had means significantly higher at the .05 level than regular education teachers.

The data indicated that the demographic variables of: number of team members, types of specialists represented on the team, type of handicapping condition, age and ethnicity did not affect the IEP characteristics or the opinions of service providers.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Congruence among the IEP components and the implemented program in relation to the type of team writing the IEP was reviewed and the perceptions of those who provide the services to special education students, parents and students were also documented, as well as other characteristics of the student and the IEP.

The seventeen composites used reduced the data from six instruments and along with individual item scores were used to compare with the composite scores and to report item results. Results were compared within instruments and across instruments. Matches and no matches were compared for pairs of indexed characteristics as well as by type of IEP. Reliability coefficients indicated moderate to high results with nine of eleven above .70 and the other two above .61. The Pearson Product Moment Correlation matrix of every scale with every other scale indicated the scales within scales were in fact measuring something different. The Stepwise Multiple Regression indicated that the single best predictor of total matches is the goals scale of the Quality Review. The Quality Review and Compliance Review scales alone account for 30% of the variance

in total matches with an additional 1% of the variance accounted for in all the other instruments combined.

Discussion For Research Question 1

Is there congruence for special education students among the factors of: IEP assessment, IEP objectives, IEP services, materials and equipment, implemented program services, materials and equipment? The data indicate 69.4% total match for the four factors. The mean scores for match and no match indicated similar incidence of match (16.4) and mis-match (16.2). Descriptive statistics such as these require the establishment of arbitrary standards to determine if an acceptable level of performance has been reached. Conversely, levels of significance may be used as standards to test for differences in amounts of congruence in specific types of match by using scores from other pairs as a standard. The question of setting standards must be answered by the local educational agency whose staff may be evaluated in future studies. In this study, standards were established by using performance levels indicated from data on other matches and IEP characteristics. While Federal law has mandated these activities, no criteria for performance have been established. The results of ANOVA showed that there was statistically significant differences in the percent of matches by the different types of matches. The results of the t-test showed that in the chain of events from Multidisciplinary Assessment to Objectives to IEP Services/Materials/Equipment to Program Services/Materials/Equipment, the weakest link was between Multidisciplinary Assessment and Objectives. There was an average of 60.3% matches between Multidisciplinary Assessment and Objectives as compared to 70.9% matches between Objectives and IEP Services/Materials/Equipment. This difference was significant at the .05 level. On the other hand, there were no statistically significant differences between the two links of Objectives to IEP Services/Materials/Equipment and IEP Services/Materials/Equipment to Program Services/Materials/Equipment.

The information obtained in this study implies that there is a moderately acceptable amount of congruence among the IEP factors

examined. However, existing differences within individual pairs of factors identified a need to examine more closely the relationship between assessment and the written objectives. The standard of match established by each of the other individual pairs of factors was not met for assessment and objectives, which suggests the need for attention in this area. Such attention may include further research or a treatment which would alter and improve the level of performance.

As activities are undertaken to remediate areas needing attention, scores may be expected to increase. Therefore, seemingly arbitrary standards which appear to be far beyond current performance levels may be attained and maintained. Acceptable standards for congruence among the IEP factors included in the research question may be above 70% or 80%. Standards for compliance items may be even higher. The result obtained in this study (69.4% total match for the four factors) does not meet this criteria, but it could be attained if direct attention was given to further training in translating assessment data into appropriate written objectives. This need for training may be identified by the t-test scores which are significantly different at or above the .05 level. The standard acceptable levels of significance may be used as criterion for identifying areas in need of attention. Local educational agencies must examine all factors in thier situation to establish priorities for action.

Discussion For Research Question 2

When IEPs are written by multidisciplinary teams, is there more congruence among the factors of: IEP assessment, IEP objectives, IEP services, materials and equipment, implemented program services, materials and equipment than when IEPs are written by annual review teams? Hotellings' T^2 was not statistically significant, suggesting that taken as a set, there were no significant differences in the percent of matches between the IEPs written by multidisciplinary teams and the IEPs written by annual review teams. However, the percentage of matches on separate t-tests was higher for the annual review team than for the multidisciplinary team in every instance. For two types of matches, Objectives by Program Services/Materials/Equipment and IEP

Services/Materials/Equipment by Program Services/Materials/Equipment, the differences between the multidisciplinary team and the annual review team were statistically significant at the .02 level. Since both of these significant differences involved a link with the program services actually implemented, they suggest that there is greater congruence among the various steps in the IEP process and program implementation when the IEPs are written by annual review teams rather than multidisciplinary teams. The superior percentages of the annual review team are further strengthened by the fact that the IEPs used to compare the two types of teams were written for the same student and comprised the same sample of students. Therefore, student variability is ruled out as an explanation for these differences.

The problem of incongruence between IEP factors in IEPs written by multidisciplinary teams may be approached from several directions. The provision of adequate tenure on an assignment will allow those professionals to develop their individual style, learn the necessary information about the other professional staff, and implement this key knowledge into a smooth efficient program delivery system for the parents and students served.

Discussion For Research Question 3

Do the compliance and quality characteristics of IEPs written by multidisciplinary teams differ from the compliance and quality characteristics of IEPs written by annual review teams? The average scores for the annual review teams were higher than those for the multidisciplinary teams for every Compliance Review and Quality Review characteristic. The statistical significance at or above the .02 level for some of the Compliance and Quality Review characteristics indicates that the proximity to and the impact on the implemented program of the annual review team are not the only factors which distinguish the annual review team as superior. Characteristics of compliance and quality are different and higher for the annual review team. The characteristics which were significantly different were the Compliance Review statements composite (which recorded information about whether the IEP included

complete, partial, or no statements about the student's present level of performance, long-range goals, objectives, duration of services, and other characteristics), the Compliance Review Total composite, and the Quality Review services.

IEPs written by multidisciplinary teams can be identified 70% of the time from the IEPs written by annual review teams by a set of 5 (out of 18 possible) discriminating variables. The set of 5 discriminating variables included: percent of matches of Objectives by Program Services/Materials/Equipment, Compliance Review totals, percent of matches of Objectives by IEP Services/Materials/Equipment, total percentage of matches, and the number of services listed on the IEP. Here again, the superiority of the scores for IEPs written by annual review teams over those written by multidisciplinary teams is strengthened by the fact that the comparisons were based on IEPs written for the same student within the sample.

It would seem logical that members of the multidisciplinary team, whose major responsibilities are the assessment, identification, and placement of special education students, would be required to be highly acquainted with issues concerning compliance in their approach to the IEP and to serve as a resource in the compliance area to others in the school district. The superiority of the annual review team on quality characteristics may be the result of the desire to create an IEP which is useful to the service providers on the team, as they prepare to provide those services. It may also be that the major focus of staff development in the implementation of PL 94-142 has been with the responsibilities of the service providers.

The concept of on-site consultants in the classroom is not new. Using of members of the multidisciplinary team as classroom consultants may foster in them a better understanding of the implemented program. The responsibility for these activities needs to be clearly stated on job descriptions and a significant allocation of time given to providing this service. This contact with the classroom will also improve the efficiency of assessment by members of the multidisciplinary team, as well as improving the appropriateness of the IEPs which are written for classroom implementation.

The law requires that a teacher be a member of the multidisciplinary team and the IEP writing team, but the background and relationship of the teacher to the student is not specified. The teacher chose may be relieved of classroom duty and given the full-time task of sitting on the multidisciplinary team. One question to be answered by a study of the multidisciplinary team is: What is the role and contribution of the teacher on the committee? Involvement in the IEP writing process of the teacher who will be providing special education service to the student has been justified by this study. But the law requires that the IEP be written prior to the selection of a placement, making it difficult to choose an appropriate teacher for the committee. Administrators might establish a system where all teachers are given as a part of their job descriptions and assignments an opportunity to serve on the assessment team. The role would rotate, with those teachers having fewer students being given first opportunity. By selecting from the areas to be assessed on the assessment plan, a teacher with appropriate experience and training could be chosen to complete a valuable assessment and, by virtue of caseload or class size, might eventually become one of the service providers.

As a stronger relationship between the assessment team and the implemented program develops, the staff will adjust itself to functioning as a team. This is not a process which evolves overnight, but one which may take several years. Consistent patterns of staff rotation every year or two interrupt the continuity of the team's functioning and the IEP process. This interruption requires developing new relationships, changing procedures and patterns of operations, and reassigning the roles of staff members. Allowing the normal turnover of staff to dictate changes in the team while keeping the processes essentially the same, allows the continuing staff to develop confidence in the system and allows the new staff to enter with a foundation of training provided by the other members and a fouccation of performance expectations established by past practice.

The annual review team has demonstrated superiority to the multidisciplinary team. With all due consideration of the implications of this finding developed in the discussion, the importance of the length of

time the members of the team received student contact must not be overlooked. The proximity of the writer of the IEP to the student is apparently a very significant relationship. This study has not evaluated this factor but has addressed it through definitions. The annual review team should know the student after a year better than the multidisciplinary team after a period of not more than fifty days.

Discussion For Research Question 4

Do the opinions of service providers concerning the IEP differ according to the type of team which had written the IEP? The results of the ANOVA showed that there were statistically significant differences among the group of service providers on Service Provider Questionnaire scales. Resource specialists and speech and language specialists had the highest means on all three scales and regular education teachers were consistently among the lowest scores. The post hoc comparisons showed which pairs of service providers differ significantly at the .05 level. For the process scale, special day class teachers, resource specialists and speech Specialists had significantly higher means than regular education teachers. On the total scale special day class teachers, resource specialists and speech specialists all had higher means than regular education teachers. The division between the opinions of various types of service providers occurred between special education and regular education staff. The nature of this difference of opinion may naturally occur because of the variation in the amount of involvement with special education which exists for regular and special education staff. Regular education staff may not have had the opportunity of inservice in areas such as special education regulations, and interaction between the two groups may be inadequate. The existence of the gap between these two groups has been identified often and has been a long-standing problem. The reality of this situation is that for students (regular or special), to succeed, service providers need to share resources.

The regulations which require regular and special educators to share a student are considered by most staff to apply to special educators only, but the reality is that the staff belongs to one single educational system

which must recognize all facets of regulation. The service the regular education teacher provides to every student is supported when necessary by special education programs and services. The responsibility of both regular and special educators is to the student. If the student has special educational needs, then the educator must find ways to meet those needs. By bringing regular and special education closer togther, all students may benefit from the shared experience and training. Regular education and special education service providers must serve as resource consultants to each other. By sharing ideas, resources, opportunities, and information, true integration may be achieved for all students and the goal of having least restrictive environments for special education students may be reached.

The opinions of both the service providers represented a mis-perception of the service actually provided by the IEP writing team. The higher scores given to the multidisciplinary team by the service providers does not acknowledge the study findings that indicate IEP written by the annual review team receive higher scores. The parents' favorible scores for the annual review process may be indicative of a preference for direct contact with the service provider and ignore other factors reflected on the IEP.

Discussion For Research Question 5

Do demographic variables affect the IEP characteristics of the IEP and/or the opinions of services providers: number of team members, types of specialist represented on the team, type of handicapping condition, age and ethnicity? There were no differences in the number of members of the IEP writing team whether the team was a multidisciplinary team or an annual review team. Both groups had a mean of 3.96 members. The negative correlations of the team total scale of the Multidisciplinary Team Review with total matches, and the members scales of the Compliance Review scale with the total matches, although near zero and not statistically significant, seem to suggest that the more members on the IEP writing team the less the total matches, i.e. the less the congruence among IEP factors. Both the team total and members scales contained items about the

numbers of different professionals by role on the IEP writing team. There were no statistically significant differences between multidisciplinary teams and annual review teams in terms of their composition. These results suggest two conclusions. One is that the multidisciplinary team may not be representating many disciplines. The other, more obvious conclusion is that the presence of the actual service providers as opposed to the assessment specialists on the IEP writing team is a more important factor in the service delivery model. A multidisciplinary team should assess all areas which may relate to a student's handicapping condition and this activity should not restrict the participation of appropriate service providers. Because of the small number of members on the multidisciplinary team and the similarity in composition by role with the annual review team, the multidisciplinary team should be evaluated. Further study into the composition and activities of the multidisciplinary team is warranted. The use of the multidisciplinary team for the assessment and identification of special education students is expensive and time consuming. The need for multidisciplinary teams is not in question, but a clearer understanding of their role and function in relation to annual review teams is warranted.

No pattern of significant differences by type of student handicap was noted, indicating no differences exist. Although the elementary age group had higher mean scores than the secondary age group in every instance, no significant difference was discovered due to age grouping.

These findings indicate that the study did indeed focus on the IEP process. These findings would indicate that the instruments used did investigate the IEP process and the impact of that process on the actual programs and services provided.

Discussion On Objectives

The study results indicate a need for improvement in writing objectives related to assessment data and in implementing those objectives in the classroom. If written objectives are not congruent with the needs identified by assessment data or with the program as implemented, they can serve very little purpose. The law requires the use of objectives, but if

they are to serve the needs of the student, they must be written: to reflect the needs of the student, to be understandable to the service provider, to include observable behavior, to be specific and easily implemented, and to have a realistic potential for success by the student.

The communication of educational intentions through written curriculum, including objectives, should be of benefit to special education. Instruction through the use of curriculum is based on the premise that the institution, in this case special education, has determined what it is that the students exposed to the programs and services are to be taught and be able to perform as a result of the instruction.

A communication device such as the "Santa Clara County Curriculum Framework" provides language to professionals and parents to discuss all areas of the curriculum for both regular and special education. There are other similar materials which may serve the same purpose. The movement throughout the United States to develop a competency-based education can be applied to develop competencies for the special education student as well. "Competencies, Objectives, Performance, Evaluation," developed by the Office of the Santa Clara County Superintendent of Schools, Special Education Planning, Evaluation, and Development Unit, uses the language of the curriculum framework and establishes competencies and objectives for student performance. Here again, there are other similar materials available.

By adopting a curriculum which is broad in nature, which addresses the functional needs of the student as a member of society, and which addresses students' strengths as well as weaknesses, communication will be improved, educational intentions clarified, and all those working with the student will know the goal of the institution, whether for assessment or placement. The curriculum will allow objectives to be suggested, written, and implemented which are directed toward reaching the goal of the institution, as well as those goals of the student. The curriculum needs to be based upon the regular education curriculum and allow a student to move in and out of regular and special education without difficulty. The organizing of instructional intentions, resources, and student needs through the use of curriculum will assist special education, the students,

parents, and professionals to meet the needs of students and the mandates of the law in the most effective and efficient way.

Conclusions

The findings of this study lead to the following conclusions:

Conclusion 1: The IEP process is functioning 70% as intended.

Conclusion 2: The IEPs written by the annual review teams are better in terms of congruence than the multidisciplinary teams.

Conclusion 3: The IEPs written by annual review teams are better in terms of compliance and quality characteristics than than those IEPs written by multidisciplinary teams.

Conclusion 4. The opinions concerning the IEP of special education service providers are different from the opinions of regular education service providers.

Conclusion 5. The demographic variables of number of professionals on the IEP writing team, types of members represented on the IEP writing team, and type of handicapping condition and age of the student do not affect the characteristics of the IEP or the opinions of service providers.

Recommendations

Interpretation of the findings of this study led to the following recommendations:

Recommendation 1: The data collection instruments may be used for continued monitoring and evaluation of the IEP process.

Recommendation 2: These instruments may be used to directly identify specific areas in need of agency action, such as staff development.

Recommendation 3: Writers of IEPs need to have close proximity to the service providers and the implementation of the programs and services.

Recommendation 4: Further study into the composition and activities of the multidisciplinary team is warranted to identify the role of the team and each of the members.

Recommendation 5: Those serving on the multidisciplinary team need training in the area of writing quality IEPs that comply with the law.

Recommendation 6: The interpretation of assessment data into student needs and program objectives is an area in need of research and staff development activities.

Recommendation 7: Acceptable standards for performance on matching, compliance, and quality factors of the IEP process need to be established, and staff development programs developed and implemented to meet and maintain those standards.

Recommendation 8: The use and misuse of objectives requires staff development, use of curriculum, and consistent use of a uniform communication system.

Recommendation 9: In-classroom consultation and technical assistance provided by members of the multidisciplinary team may help to bring assessment and implemented program characteristics closer together.

Recommendation 10: The teacher serving on the multidisciplinary team needs a well defined and active role in the team's activities and needs to be an actual service provider.

Recommendation 11: Consistent patterns of staff reassignment should be avoided to assist the development of the team work needed by assessment specialists and service providers.

Recommendation 12: The responsibility of bringing regular and special educators closer together in their knowledge of the IEP process is equally shared by both regular and special education and requires active pursuit.

Recommendation 13: The provision of on-site consultation must extend to every classroom, regular or special.

Recommendation 14: Regular education staff needs to be involved in more inservice education activities with the special education staff.

Recommendation 15: Training in the IEP process must include the regular classroom teacher.

This study and the conclusions and recommendations have focused on the IEP process. To reach conclusions about the current status of the IEP process is of little value unless the information is used as a basis for improving professional service to special education students.

Replications of this study are needed to identify existing needs in local educational agencies and to monitor and evaluate change as it occurs, whether affected by staff development or other activity, in the pursuit of quality educational service. These materials andthe design of this study offer a flexible method of obtaining valid and reliable information on which to base activities for the improvement of educational services. The goal of this study to design and field study a model process for the analysis of the IEPs of special education students has been achieved.

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APPENDIX A

IEP Compliance Review

IEP Quality Review

Multidisciplinary Team Assessment Review

IEP COMPLIANCE REVIEW

Student's Name _____ Student's ID# _____

Data Collector _____ Type of IEP MA or ARA

DATA COLLECTOR INSTRUCTIONS: Check the appropriate box for each item. Please consult the Instructional Manual for any needed clarification.

1. Does this IEP include a statement of:

	Yes Complete 3	Yes, but Incomplete 2	No 1
a. The student's present levels of educational performance?	[ ]	[ ]	[ ]
b. A specified long range goal?	[ ]	[ ]	[ ]
c. Annual goals?	[ ]	[ ]	[ ]
d. Short-term instructional objectives?	[ ]	[ ]	[ ]
e. Specific special education assistance and related services to be provided to the student?	[ ]	[ ]	[ ]
f. The extent to which the student will be able to participate in regular educational programs?	[ ]	[ ]	[ ]
g. The projected dates for initiation of services?	[ ]	[ ]	[ ]
h. The rationale for each instructional setting?	[ ]	[ ]	[ ]
i. The anticipated duration of services?	[ ]	[ ]	[ ]
j. Objective criteria for determining whether the short-term instructional objectives are being achieved?	[ ]	[ ]	[ ]

2. a. Was more than one source of evaluation information (e.g. aptitude and achievement tests, teacher recommendations, physical condition, social or cultural background, and adaptive behavior) used in making placement decisions?

   0 [] No
   1 [] Yes

   b. If Yes, how many different sources?

   _____ Total Number

3. Did the meeting to review and write the IEP include:	No 0	Yes 1
a. An administrator/designee?	[ ]	[ ]
b. The student's teacher?	[ ]	[ ]
c. One or both parents?	[ ]	[ ]
d. The student?	[ ]	[ ]
e. Assessment team representative?	[ ]	[ ]
f. Other_____ (specify)?	[ ]	[ ]

If the response to question 3d is Yes, administer the STUDENT INTERVIEW.

IEP QUALITY REVIEW

Student's Name _____ Student's ID# _____

Data Collector _____ Student's Birthdate _____
(Day Month Year)

Date of initial placement _____ Date of IEP _____
(Day Month Year) (Day Month Year)

DATA COLLECTOR INSTRUCTIONS: Please consult the Instructional Manual for any needed clarification.

Student's Age Level
1 [] Elementary (under 14 years 9 months on September 1)
2 [] Secondary (14 years 9 months or over on September 1)

Student's Type of Handicap
1 [] Communicatively Handicapped
2 [] Learning Handicapped
3 [] Physically Handicapped
4 [] Severely Handicapped

Type of Assessment Team

1 [] Multidisciplinary Assessment Team (MA)
2 [] Annual Review Assessment Team (ARA)

1. a. Circle the number of curriculum areas (CA) described in the IEP, list by each the number of assessment procedures per curriculum area (0= No procedure named), and indicate the curriculum area by code for each assessment done by either team.

No. CA	No. Procedures	MA/ARA by CA					
0	____	____	____	____	____	____	____
1	____	____	____	____	____	____	____
2	____	____	____	____	____	____	____
3	____	____	____	____	____	____	____
4	____	____	____	____	____	____	____
5	____	____	____	____	____	____	____
6	____	____	____	____	____	____	____
7	____	____	____	____	____	____	____
8	____	____	____	____	____	____	____

b. ____ Total Number of Assessment Procedures

2. In general, how were the level of abilities in the specified curriculum area described? (Circle the appropriate number.)

General/ Vague				Specific/ Detailed	Not Available
1	2	3	4	5	0

3. How many student strengths were specifically identified?

_____ Total Number

4. How many student weaknesses were specifically identified?

_____ Total Number

5. On the average, how were the student strengths and weaknesses described?

General/ Vague				Specific/ Detailed	Not Available
1	2	3	4	5	0

6. Did the long-range goal include a specific statement of future expectations (e.g., work/school setting)?

0 [] No
1 [] Yes

7. How many services were to be provided this student?

_____ Total Number

8. Check the types of services, indicate the time allotted per service, and indicate the curriculum area (CA) by code for services listed in the IEP.

	Type	Amount of Time in Minutes/Week	IEP Services by CA
1	[] Academic counselor	_____min.	_____
2	[] Adaptive PE specialist	_____min.	_____
3	[] Nurse	_____min.	_____
4	[] Occupational therapist	_____min.	_____
5	[] Physical therapist	_____min.	_____
6	[] Program specialist	_____min.	_____
7	[] Psychologist	_____min.	_____
8	[] Regular education teacher	_____min.	_____
9	[] Resource specialist	_____min.	_____
10	[] Special day class teacher	_____min.	_____
11	[] Special education aide	_____min.	_____
12	[] Speech and language specialist	_____min.	_____
13	[] Social worker	_____min.	_____
14	[] Vocational education specialist	_____min.	_____
15	[] Other _____ (specify)	_____min.	_____

9. In what percentage of services was the specific type of staff to provide each service identified?
_____%

10. In what percentage of services was the time and/or amount of each of these services identified?
_____%

11. How were the services to be provided described?

General/ Vague				Specific/ Detailed	Not Available
1	2	3	4	5	0

12. Were minutes per week in each instructional setting specified?

0 [] No
1 [] Yes, partially
2 [] Yes, completely

13. What type(s) of instructional settings were listed in the IEP for for this student?

a [] Special education classroom
b [] Regular education classroom
c [] Designated service
d [] Resource specialist
e [] Other_____ (specify)

14. Circle the number of annual goals listed in the IEP, write the number of IEP objectives (IEP OBJ) per goal, and indicate the curriculum area (CA) by code for each objective.

a.

No. Goals	No. IEP OBJ	IEP OBJ by CA					
0	_____	_____	_____	_____	_____	_____	_____
1	_____	_____	_____	_____	_____	_____	_____
2	_____	_____	_____	_____	_____	_____	_____
3	_____	_____	_____	_____	_____	_____	_____
4	_____	_____	_____	_____	_____	_____	_____
5	_____	_____	_____	_____	_____	_____	_____
6	_____	_____	_____	_____	_____	_____	_____
7	_____	_____	_____	_____	_____	_____	_____
8 or more	_____	_____	_____	_____	_____	_____	_____

b. _____ Total Number of IEP Objectives

15. To what extent did areas of identified student need have goals written?

No Areas All Areas
1 2 3 4 5

16. What percentage of objectives stated conditions and stimulus?
_____%

17. For what percentage of objectives could performance be observed?
_____%

18. What percentage of objectives had a specific criterion for determining a successful performance?
_____%

19. What percentage of objectives had baseline data?
_____%

20. For what percentage of the objectives was the student's performance retested and recorded in the IEP?
_____%

21. To what extent did objectives relate to this student's identified annual goals?

None All
1 2 3 4 5

22. a. Write how many of each type of member was on the IEP writing team next to their role.

	Number	Role
1	_____	Academic counselor
2	_____	Adaptive PE specialist
3	_____	Nurse
4	_____	Occupational therapist
5	_____	Physical therapist
6	_____	Program specialist
7	_____	Psychologist
8	_____	Regular education teacher
9	_____	Resource specialist
10	_____	Special day class teacher
11	_____	Special education aide
12	_____	Speech and language specialist
13	_____	Social worker
14	_____	Vocational education specialist
15	_____	Other _____ (specify)

b. _____ Total Number of Members on IEP Writing Team

23. Write the total number of materials and equipment listed in the IEP, identify the items, and indicate the curriculum area (CA) by code for each item specifically listed in this student's IEP.

_____ Total Number

IEP Materials & Equipment	CA
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____

MULTIDISCIPLINARY TEAM ASSESSMENT REVIEW

Student's Name _____ Student's ID# _____

Data Collector _____ Date of Assessment _____
(Day Month Year)

DATA COLLECTOR INSTRUCTIONS: Please consult the Instruction Manual for any needed clarification.

1. Was there evidence and/or documentation in the file that a multidisciplinary team meeting was held?

   0 [] No
   1 [] Yes

2. Was there evidence and/or documentation in the file that a multidisciplinary assessment was completed?

   0 [] No
   1 [] Yes

3. a. Write how many of each type of member was on the IEP writing team next to their role.

	Number	Role
1	_____	Academic counselor
2	_____	Adaptive PE specialist
3	_____	Nurse
4	_____	Occupational therapist
5	_____	Physical therapist
6	_____	Program specialist
7	_____	Psychologist
8	_____	Regular education teacher
9	_____	Resource specialist
10	_____	Special day class teacher
11	_____	Special education aide
12	_____	Speech and language specialist
13	_____	Social worker
14	_____	Vocational education specialist
15	_____	Other _____ (specify)

   b. _____ Total Number of Members on IEP Writing Team

APPENDIX B

Service Provider Questionnaire

Service Provider Interview

Parent Questionnaire

Student Questionnaire

SERVICE PROVIDER QUESTIONNAIRE

Student's Name_____ Student's ID# _____

School_____ District_____ Birthdate_____
(Day Month Year)

Data Collector_____

INSTRUCTIONS: Please help to evaluate the IEP process by completing this questionnaire in terms of the identified student's IEP. This questionnaire will take about 10 minutes. Most questions can be answered by checking the appropriate responses. If a question is not applicable, please write "NA" by it. Thank you for your cooperation.

SECTION I

1. In which type(s) of instructional setting do you work with this student?

   a [] Regular education classroom
   b [] Special education classroom
   c [] Designated service environment
   d [] Resource specialist room
   e [] Other _____
   (specify)

2. What role do you play in this student's instructional program? (Please check only one.)

   1 [] Academic counselor
   2 [] Adaptive PE specialist
   3 [] Nurse
   4 [] Occupational therapist
   5 [] Physical therapist
   6 [] Program specialist
   7 [] Psychologist
   8 [] Regular education teacher
   9 [] Resource specialist
   10 [] Special day class teacher
   11 [] Special education aide
   12 [] Speech and language specialist
   13 [] Social worker
   14 [] Vocational education specialist
   15 [] Other _____
   (specify)

3. If you are a specialist service provider rather than a classroom teacher, approximately how many minutes per week do you work with this student?

   ____ Total Minutes

4. Do you have access to this student's IEP?
   0 [] No
   1 [] Yes

   If No, please describe why _____

   _____

   _____

5. Are you familiar with this student's IEP?
   1 [] Yes
   2 [] No

If you answered Yes to question 5, continue to SECTION II.
If you answered No to question 5, please turn to SECTION III.

SECTION II

6. a. In your opinion, will this student reach all IEP objectives?

   0 [] Don't know
   1 [] No
   2 [] Yes

   b. If No, why?

   a [] Objectives unrealistic
   b [] Sufficient services were not available
   c [] Other _____
   (specify)

7. To what extent, in your opinion, does this student's performance match expectations as defined in the IEP?

   1 [] Proceeded more quickly than expected
   2 [] Proceeded right on schedule
   3 [] Proceeded less quickly than expected
   4 [] The IEP was not specific enough to measure progress
   5 [] Don't know

8. If this student's needs changed, was the IEP revised in writing?

   1 [] Don't know
   2 [] Didn't change
   3 [] No
   4 [] Yes

9. How often do you discuss this student's IEP with him or her during a year?

1 [] Never
2 [] 1-3 times a year
3 [] 4-6 times a year
4 [] 7-9 times a year
5 [] more than 9 times a year

10. Approximately how much of the time spent in your class does this student spend on goals and objectives specified in the IEP?

1 [] 0%
2 [] 10%
3 [] 20%
4 [] 30%
5 [] 40%
6 [] 50%
7 [] 60%
8 [] 70%
9 [] 80%
10 [] 90%
11 [] 100%

11. How important do you believe this student's IEP instructional objectives are? (Circle the appropriate number.)

Not Very
1 2 3 4 5

12. To what extent did you find this student's IEP recommendations useful to you in designing activities?

A little A lot
1 2 3 4 5

13. To what extent do you feel the IEP appropriately reflects this student's needs?

A little A lot
1 2 3 4 5

14. Please describe any difficulties you have encountered when trying to implement this student's IEP _____

_____

_____

_____

SECTION III

15. Whether or not the type of assistance or service was called for in the IEP, please indicate whether, in your opinion, the assistance or service was:

(A) Needed and/or
(B) Provided for this student.

		(A) Needed	(B) Provided
a	Physical therapy	1 [ ]	2 [ ]
b	Occupational therapy	3 [ ]	4 [ ]
c	Psychological services	5 [ ]	6 [ ]
d	Academic counseling	7 [ ]	8 [ ]
e	Resource specialist services	9 [ ]	10 [ ]
f	Special day class	11 [ ]	12 [ ]
g	Speech and language services	13 [ ]	14 [ ]
h	Nursing services	15 [ ]	16 [ ]
i	Special education aide services	17 [ ]	18 [ ]
j	Regular class	19 [ ]	20 [ ]
k	Program specialist services	21 [ ]	22 [ ]
l	Adaptive physical education	23 [ ]	24 [ ]
m	Social work services	25 [ ]	26 [ ]
n	Vocational education services	27 [ ]	28 [ ]
o	Other _____ (specify)	29 [ ]	30 [ ]

16. Indicate whether, in your opinion, the assistance or service provided for this student was adequately available.

		Adequately Available: Yes	No
a	Physical therapy	1 [ ]	2 [ ]
b	Occupational therapy	3 [ ]	4 [ ]
c	Psychological services	5 [ ]	6 [ ]
d	Academic counseling	7 [ ]	8 [ ]
e	Resource specialist services	9 [ ]	10 [ ]
f	Special day class	11 [ ]	12 [ ]
g	Speech and language services	13 [ ]	14 [ ]
h	Nursing services	15 [ ]	16 [ ]
i	Special education aide services	17 [ ]	18 [ ]
j	Regular class	19 [ ]	20 [ ]
k	Program specialist services	21 [ ]	22 [ ]
l	Adaptive physical education	23 [ ]	24 [ ]
m	Social work services	25 [ ]	26 [ ]
n	Vocational education services	27 [ ]	28 [ ]
o	Other _____ (specify)	29 [ ]	30 [ ]

17. To what extent do you feel this student's instructional program is coordinated among those providing service? (Circle the appropriate number.)

A little				A lot
1	2	3	4	5

18. To what extent do you feel this student is being served by the current program?

Poorly				Very well
1	2	3	4	5

Thank you very much for your assistance.

SERVICE PROVIDER INTERVIEW

Student's Name _____ Student's ID# _____

Service Provider's Name _____ Data Collector _____

DATA COLLECTOR INSTRUCTIONS: Ask the service provider to show you the implemented program services, materials, and equipment, (PROG S/M/E) list them, and indicate the curriculum area (CA) by code. Then write the names of the personnel identified as providing service.

Services

1. Please show me items that indicate the services provided to meet this student's objectives (e.g., lesson plans, schedules, attendance records).

Items of PROG S/M/E	CA	Items of PROG S/M/E	CA

Materials and Equipment

2. Please show me the instructional materials or equipment used to meet this student's objectives (e.g., books, games, typewriter).

Items of PROG S/M/E	CA	Items of PROG S/M/E	CA

Personnel

3. Please tell me the names of others providing assistance or service to this student on a scheduled basis to meet the IEP objectives.

Name

PARENT/GUARDIAN QUESTIONNAIRE

Student's Name _____ Student's ID# _____

School _____ District _____ Date _____
Day Month Year

INSTRUCTIONS: Please help to evaluate the IEP process by completing this questionnaire in terms of your child's IEP. The questionnaire will take about 10 minutes. Most questions can be answered by checking the appropriate response.

What is your relationship to the child?

1 [] Father
2 [] Mother
3 [] Male guardian
4 [] Female guardian
5 [] Other _____
(specify)

What category most accurately identifies your child's ethnic group?

1 [] Hispanic
2 [] Asian or Pacific Islander
3 [] White, not of Hispanic Origin
4 [] American Indian or Alaskan
5 [] Black, not of Hispanic Origin
6 [] Filipino

What language most often is spoken in the home?

1 by you? _____
2 by your child? _____

1. How familiar are you with your child's individualized education program (IEP)? (Circle the appropriate number.)

Not				Very
1	2	3	4	5

2. Do you have a copy of your child's IEP?

1 [] Don't know
2 [] No
3 [] Yes

3. How often do you discuss your child with his or her teacher?

1 [] Never
2 [] 1-3 times a year
3 [] 4-6 times a year
4 [] 7-9 times a year
5 [] More than 9 times a year

4. How carefullly were your child's needs identified by the assessment recommendations?

Not Very
1 2 3 4 5

5. Whether or not the type of assistance or service was called for in the IEP, please indicate, in your opinion, whether the assistance or service was provided.

a [] Physical therapy
b [] Occupational therapy
c [] Psychological services
d [] Academic Counseling
e [] Resource specialist services
f [] Special day class
g [] Speech and language services
h [] Nursing services
i [] Special education aide services
j [] Regular class
k [] Program specialist services
l [] Adaptive physical education
m [] Social work services
n [] Vocational education services
o [] Other _____
(specify)

6. Do you believe any types of assistance or service listed above are needed and not provided?

0 [] No
1 [] Yes

If Yes, please list those types of services or assistance needed

_____

_____

7. In your opinion, how well has your child's IEP been implemented:

   a. by needed types of services provided?

   Not Very
   1 2 3 4 5

   b. by appropriate amounts of services provided?

   Not Very
   1 2 3 4 5

8. How carefully do you think your child's strengths and weaknesses were considered when developing the IEP?

   Not Very Don't Know
   1 2 3 4 5 0

9. How important do you believe the goals selected for your child are?

   Not Very
   1 2 3 4 5

10. How responsive, interested, or accepting was the IEP committee to your comments?

    Not Very Didn't Participate
    1 2 3 4 5 0

STUDENT INTERVIEW

Student's Name _____ Student's ID#_____

Data Collector _____ School_____

DATA COLLECTOR INSTRUCTIONS: Read each question and the response alternatives to the student. Where there are several alternatives obtain a response to each before proceeding to the next. Record the appropriate responses.

1. Have you seen your individualized education program (IEP)?

   1 [] Yes
   2 [] No
   3 [] Not sure

2. Does your family have a copy of your IEP?

   1 [] Yes
   2 [] No
   3 [] Not sure

3. How important do you believe the IEP goals selected for you are?

   Not Very
   1 2 3 4 5

4. Which of these services are you receiving from the school, in addition to those provided by your classroom teacher?

   a [] Extended school year (summer school)
   b [] Physical therapy
   c [] Occupational therapy
   d [] Psychological services
   e [] Academic counseling services
   f [] Resource specialist
   g [] Special day class
   h [] Speech and language services
   i [] Nursing services
   j [] Extra help in academic areas (e.g. reading, math)
   k [] Adaptive physical education
   l [] Social work services
   m [] Vocational education services
   o [] other _____
   (specify)

5. Do you believe you need more of any of the services you are already receiving?

   0 [] No
   1 [] Yes

   If Yes, please name _____

6. How carefully do you think your strengths and weaknesses were considered when the IEP was developed?

Not				Very	Don't Know
1	2	3	4	5	0

7. Which of these services, in addition to those provided by your classroom teacher, do you believe you need from your school?

a [] Extended school year (summer school)
b [] Physical therapy
c [] Occupational therapy
d [] Psychological services
e [] Academic counseling
f [] Resource specialist services
g [] Special day class
h [] Speech and language services
i [] Nursing services
j [] Extra help in academic areas (e.g. reading, math)
k [] Adaptive physical education
l [] Social work services
m [] Vocational education services
o [] other _____
(specify)

8. In your opinion, to what extent are the special education services provided completely meeting your priority educational needs?

A Little				A Lot	Don't Know
1	2	3	4	5	0

9. In your opinion, how well has your IEP been implemented:

a. by needed types of services provided?

Not				Very
1	2	3	4	5

b. by appropriate amounts of services provided?

Not				Very
1	2	3	4	5

10. a. Do you think you will reach <u>all</u> of your IEP objectives?

1 [] Don't Know
2 [] No
3 [] Yes

b. If No, why not?

a [] Objectives were unrealistic
b [] Sufficient services were not available
c [] Other _____
(specify)

11. Approximately how much time in class do you spend on the objectives listed in your IEP?

1 [] 0%
2 [] 10%
3 [] 20%
4 [] 30%
5 [] 40%
6 [] 50%
7 [] 60%
8 [] 70%
9 [] 80%
10 [] 90%
11 [] 100%

12. How often did you discuss your IEP with your teacher during this school year?

1 [] Never
2 [] 1-3 times
3 [] 4-6 times
4 [] 7-9 times
5 [] More than 9 times

13. Please feel free to make any other comments regarding your IEP or special education program _____

_____

_____

_____

APPENDIX C

Curriculum Area Summary Form

Matching Data Summary Form

Keypunch Summary Form

IEP MAP CURRICULUM AREA SUMMARY FORM

CA = Curriculum Area
MA = Multidisciplinary
ARA = Annual Review Assessment on the IEP
OBJ = Objectives on the IEP
IEP S/M/E = Type of services, materials and equipment listed on the IEP
PROG S/M/E = Type of services, materials and equipment provided in the programs implemented

Record CA by Code No. 1
Record 0 where no information available
Draw a line through column not used (I MA or II ARA) depending on type of IEP

Student _____

Student ID# _____

Data Collector _____

CA	I. MA by CA (Quality Review question #1a.) (Use only column I. or II.)	II. ARA by CA (Quality Review question #1a.)	III. OBJ by CA (Quality Review question #14a.)	IV. IEP S/M/E by CA (Quality Review questions 8 & 23.)	V. PROG S/M/E by CA (Service Provider Interview questions 1 & 2)	Total No. of CA's
A. Language/Communication						
B. Academic Achievement						
C. Physical Education/Recreation						
D. Social/Emotional Behavior						
E. Independent Living						
F. Career/Vocational Education						
G. Health Education						
H. Fine Arts						
Total No. of CA's						

(1 See Instructional Manual for use of appropriate curriculum framework.)

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IEP MAP MATCHING DATA SUMMARY FORM

CA = Curriculum Area
MA = Multidisciplinary
ARA = Annual Review Assessment on the IEP
OBJ = Objectives on the IEP
IEP S/M/E = Type of services, materials and equipment listed on the IEP
PROG S/M/E = Type of services, materials and equipment provided in the program as implemented

Draw lines through any column not used (MA or ARA) depending on type of IEP.
Compare columns I through IV on the Curriculum Area Summary Form.
Record / above the diagonal where there *is* a match.
Record 0 below the diagonal where there is *no* match.

Student Name _____

Student ID# _____

Data Collector _____

	MA by OBJ I x III	MA by IEP S/M/E I x IV	MA by PROG S/M/E I x V	ARA by OBJ II x III	ARA by IEP S/M/E II x IV	ARA by PROG S/M/E II x V	OBJ by IEP S/M/E III x IV	OBJ by PROG S/M/E IV x V	IEP S/M/E by PROG S/M/E IV x V	No. of Match No Match
A. Language/Communication										
B. Academic Achievement										
C. Physical Education/Recreation										
D. Social/Emotional Behavior										
E. Independent Living										
F. Career/Vocational Education										
G. Health Education										
H. Fine Arts										
Total of Match/No Match										

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IEP MAP KEYPUNCH SUMMARY FORM

Student's Name _____ Student's ID#_____

Data Collector _____

DATA COLLECTOR INSTRUCTIONS: Complete this form from the information on the Curriculum Area Summary Form and the Matching Data Summary Form. Draw a line through any column where no information is available on the other forms.

1. Curriculum area summary

MULTIDISCIPLINARY TEAM				ANNUAL REVIEW TEAM			
CA	No.	Source	No.	CA	No.	Source	No.
A.	_____	I. MA	_____	A.	_____	II. ARA	_____
B.	_____	III. OBJ	_____	B.	_____	III. OBJ	_____
C.	_____	IV. IEP S/M/E	_____	C.	_____	IV. IEP S/M/E	_____
D.	_____	V. PROG S/M/E	_____	D.	_____	V. PROG S/M/E	_____
E.	_____	TOTAL	_____	E.	_____	TOTAL	_____
F.	_____			F.	_____		
G.	_____			G.	_____		
H.	_____			H.	_____		
TOTAL	_____			TOTAL	_____		

2. Matching data summary

MULTIDISCIPLINARY TEAM

Ratio of Matches by Curriculum Area

CA	No. of Matches	Total No. of Matches & No Matches	Percent of Matches
A.	____	____	____
B.	____	____	____
C.	____	____	____
D.	____	____	____
E.	____	____	____
F.	____	____	____
G.	____	____	____
H.	____	____	____
TOTAL	____	____	____

Ratio of Matches by Source

Source	No. of Matches	Total No. of Matches & No Matches	Percent of Matches
MA by OBJ	____	____	____
MA by IEP S/M/E	____	____	____
MA by PROG S/M/E	____	____	____
OBJ by IEP S/M/E	____	____	____
OBJ by PROG S/M/E	____	____	____
IEP S/M/E by PROG S/M/E	____	____	____
TOTAL	____	____	____

ANNUAL REVIEW TEAM

Ratio of Matches by Curriculum Area

CA	No. of Matches	Total No. of Matches & No Matches	Percent of Matches
A.	____	____	____
B.	____	____	____
C.	____	____	____
D.	____	____	____
E.	____	____	____
F.	____	____	____
G.	____	____	____
H.	____	____	____
TOTAL	____	____	____

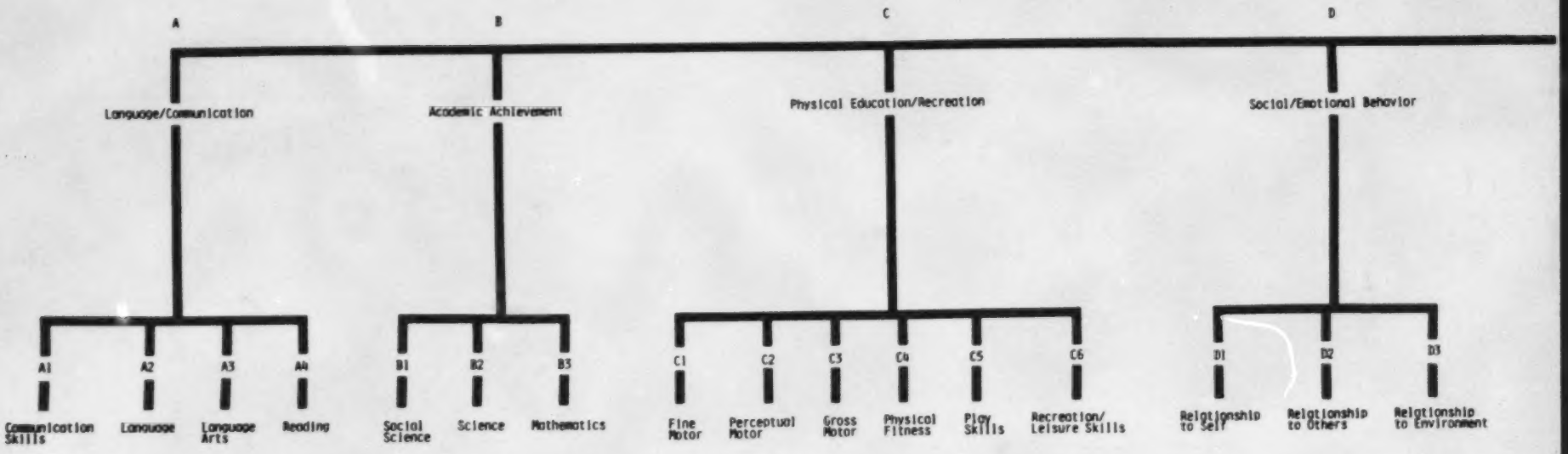
Ratio of Matches by Source

Source	No. of Matches	Total No. of Matches & No Matches	Percent of Matches
ARA by OBJ	____	____	____
ARA by IEP S/M/E	____	____	____
ARA by PROG S/M/E	____	____	____
OBJ by IEP S/M/E	____	____	____
OBJ by PROG S/M/E	____	____	____
IEP S/M/E by PROG S/M/E	____	____	____
TOTAL	____	____	____

APPENDIX D

Santa Clara County Special Education Curriculum Framework

Goal: To provide a special education curriculum to facilitate an individualized education program for pupils with exceptional needs.



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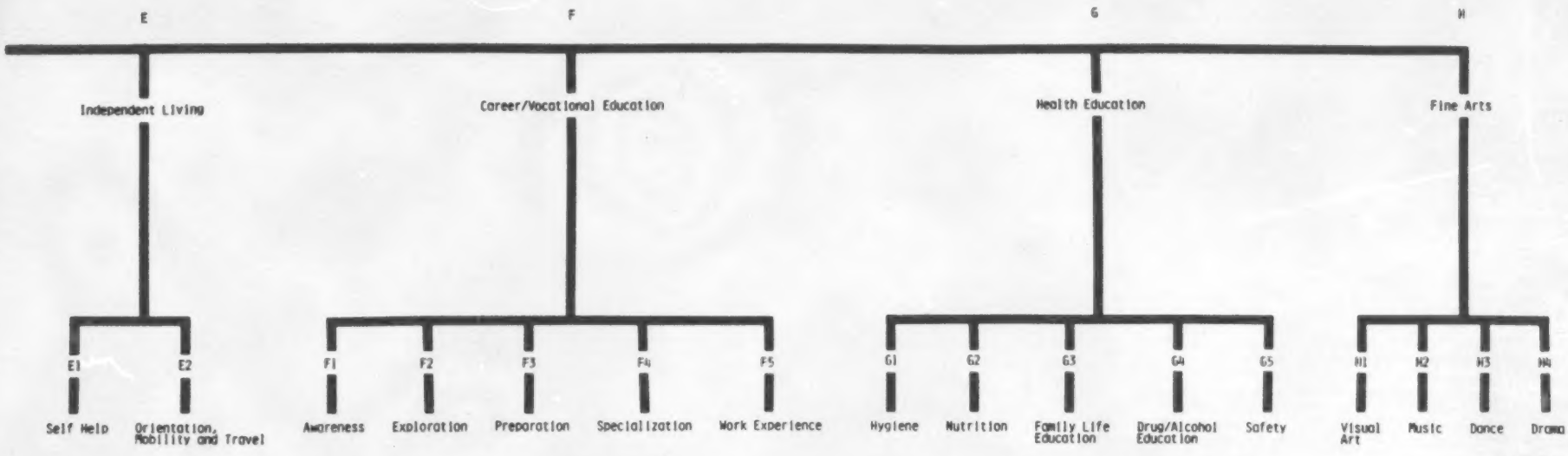
Color Codes:	Tan	Bronze	Orange	Gold

SANTA CLARA COUNTY

SPECIAL EDUCATION CURRICULUM FRAMEWORK

CRITICAL COMPETENCIES



39 - 44
Yellow

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APPENDIX E

Table 20: Composites for Record Review and Investigation Instruments

Table 21: Statistical Analyses for Each Primary Question

Table 22: Analyses by Composite and Instrument

Table 20
Composites for Record Review Instruments
and Investigation Instruments

Instrument	Composite	Description	Items	Type of Reliability
Service Provider Questionnaire	IEP Process	Opinions about the adequacy of the IEP development process	5,6a,8, 9,11-14	Internal consistency
	IEP Implementation	Opinions about the adequacy of actual implementation of the IEP in meeting needs, goals, etc.	66,7, 10,16a-n,17,18	Internal consistency
	IEP Total	Process and Implementation scales combined; index of judgment about overall adequacy of the IEP.	5,6,7, 8,9,10, 16,17, 18	Internal consistency
IEP	IEP Statement	Record of specific statements in the IEP about current student performance, goals, objectives, settings, services, and evaluations.	1a-1j, 2a	Internal consistency Interrater agreement
	IEP Sources	Record of number of sources of information used in making placement	2a,b	Interrater agreement
	IEP Members	Record of members of the IEP writing and review team	3a-3f	Internal consistency Interrater agreement
	Compliance Total	Combination of statements, sources and members scales; summary index of IEP comliance with requirements of law.	1a-3f	Internal consistency Interrater agreement

Quality Review	IEP Assessment	Opinions about the adequacy of assessment of the student strengths and expectations for success	2,3,4, 5,6	Internal consistency Interrater agreement
	IEP Services	Opinions about the adequacy of the descriptions of services to be provided to the student	9,10, 11,12	Internal consistency Interrater agreement
	IEP Goals	Opinions about the adequacy of statements of goals, objectives, and evaluation	15,16, 17,18, 19,20, 23	Internal consistency Interrater agreement
	IEP Total Quality	Combination of assessment, services, and goals scales; summary of overall quality of the IEP	2-6, 9-12, 15-20 23	Internal consistency Interrater agreement
	Number and Types of Curriculum Areas	Record of numbers and types of curriculum areas listed in the IEP	1	Interrater agreement
	Number of Assessment Procedures	Record of number of assessment procedures per curriculum area listed in the IEP	1	Interrater agreement
	Types of Services	Record of types of personnel who will provide service to the student,as listed in the IEP	8	Interrater agreement
	Amounts of Services	Record of amounts of service (in minutes per week) to be provided to the student, as listed in the IEP	8	Interrater agreement
	Settings	Record of instructional settings for the student, as listed in the IEP	13a-13e	Interrater agreement
	Number of	Record of number of	14	Interrater agreement

	Goals	goals per curriculum area listed in the IEP		
	Number of Objectives	Record of number of objectives per curriculum area listed in the IEP	14	Interrater agreement
	IEP Members	Record of the members of IEP writing team by role.	21a-21q	Interrater agreement
Multidisciplinary Team Assessment Review	Team Meeting	Record of evidence that a team meeting and assessment were conducted	1,2	Interrater agreement
	Team Members	Record of numbers and types of team members by role	3a-3o	Interrater agreement
	Team Total	Combination of meeting and members scales; index of extensiveness of team assessment process.	1-3o	Internal consistency
Summary Matching Data Form	MA by OBJ	Matches across curriculum areas between assessment on the IEP and objectives listed in the IEP	MA by OBJ, A-H	Interrater agreement
	MA by IEP S/M/E	Matches across curriculum areas between assessment on the IEP and types of services, materials, and equipment listed on the IEP	MA by IEP S/M/E, A-H	Interrater agreement
	MA by PROG S/M/E	Matches across curriculum areas between assessment on the IEP and types of services, materials, and equipment listed on the IEP	MA by PROG S/M/E, A-H	Interrater agreement
	OBJ by IEP S/M/E	Matches across curriculum areas between objectives on	OBJ by IEP S/M/E,	Interrater agreement

	the IEP and types of services, materials, and equipment listed on the IEP	A-H	
OBJ by PROG S/M/E	Matches across curriculum areas between objectives on the IEP and types of services, materials, and equipment in the implemented program	OBJ by PROG S/M/E, A-H	Interrater agreement
IEP S/M/E by PROG S/M/E	Matches across curriculum areas be tween types of services, materials, and equipment listed on the IEP and types of services, materials and equipment in the implemented program	IEP S/M/E by PROG S/M/E, A-H	Interrater agreement
Total	Summary of all matches across curriculum areas among assessment on the IEP; objectives and types of service listed on the IEP; and types of service in the implemented program	All items in all the summary Matching Data Form Composites listed above	Interrater agreement

Note:
1. Based on sample of 19 service providers.
2. Number in parentheses() is the number of items initially in the composite. Items which had zero variance were not included in the computation of the reliability coefficient.
3. Standardized alpha coefficient.

Table 21

Statistical Analyses for Each Primary Question

PRIMARY QUESTION	ANALYSIS	SPSS PROGRAM FILE
3) What are the opinions of service providers, parents, and students concerning the IEP Process and the special education program as implemented?	1. Means, medians, standard deviations of:	
	a. Service Providers Process Scale Implementation Scale Total Scale	SPQ, COMPLETE
	b. Parent Questionnaire Process Scale Implementation Scale Total Scale	COMPLETE
	c. Student Interview Process Scale Implementation Scale Total Scale	COMPLETE

**Optional

Table 22
Analyses by Composite and Instrument

Instrument	Composite	Analyses
Service Provider Questionnaire	IEP Process IEP Implementation IEP Total	-Internal Consistency Reliability -Means, Standard Deviations -Pearson Product Moment Correlations -Predictor variables in Stepwise Multiple Regression -Dependent variable in ANOVA with role of service provider as independent variable
Compliance Review	IEP Statements IEP Sources Compliance Total	-Internal Consistency Reliability (except IEP Sources) -Means, Standard Deviations -Pearson Product Moment Correlations with composites of other instruments -Dependent variables in Hotellings' T and t-tests for related samples with type of team (annual review or multidisciplinary) as independent variable -Discriminating variables in Stepwise Discriminant Analysis with annual review and multidisciplinary as groups to be discriminated -Dependent variables in MANOVA and ANOVA with type of handicap as independent variable
Quality Review	IEP Assessment IEP Services IEP Goals Total Quality Number of Curriculum Areas Amounts of Service Number of Goals Number of Objecetives Type of Curriculum Areas	-Internal Consistency Reliability -Pearson Product Moment Correlations with composites of other instruments -Predictor variables in Stepwise Multiple Regression with Matches as criterion variable -Dependent variables in Hotellings' T and t-tests with type of team as independent variable -Discriminating variables in Stepwise Discriminant Analysis with type of group to be discriminated

		-Dependent variables in MANOVA and ANOVA with type of handicap as independent variable
	Type of Curriculum Areas	-X^2 Tests for Independence with type of team as independent variable
	Types of Service Settings	-X^2 Tests for Independence with type handicap and grade level as independent variables
	IEP Members	-X^2 Tests for Independence with type of team as independent variable
Multidisciplinary Team Review	Team Total	-Internal Consistency Reliability -Pearson Product Moment Correlations with composites of other instruments -Predictor variable in Stepwise Multiple Regression with Matches as criterion variable
Student Interview	IEP Process IEP Implementation IEP Total	-Internal Consistency Reliablity -Pearson Product Moment Correlations with composites of other instruments -Predictor variables in Stepwise Multiple Regression with Matches as criterion variable
Parent/Guardian Questionnaire	IEP Process IEP Implementation IEP Total	-Internal Consistency Reliability -Pearson Product Moment Correlations with composites of other instruments -Predictor variables in Stepwise Multiple Regression with Matches as criterion variable
Summary Matching	Assessment by OBJ Assessment by IEP S/M/E Assessment by PROG S/M/E OBJ by IEP S/M/E OBJ by IEP S/M/E IEP S/M/E by PROG S/M/E	-Criterion Variables in Stepwise Multiple Regression -Means, Standard Deviations -Dependent variables in Hotellings' T and t-tests with type of team as independent variable -Discriminating variables in Stepwise Discriminant Analysis with type of team as groups to by discriminated -Dependent variables in MANOVA and ANOVA with type of handicap as independent variable